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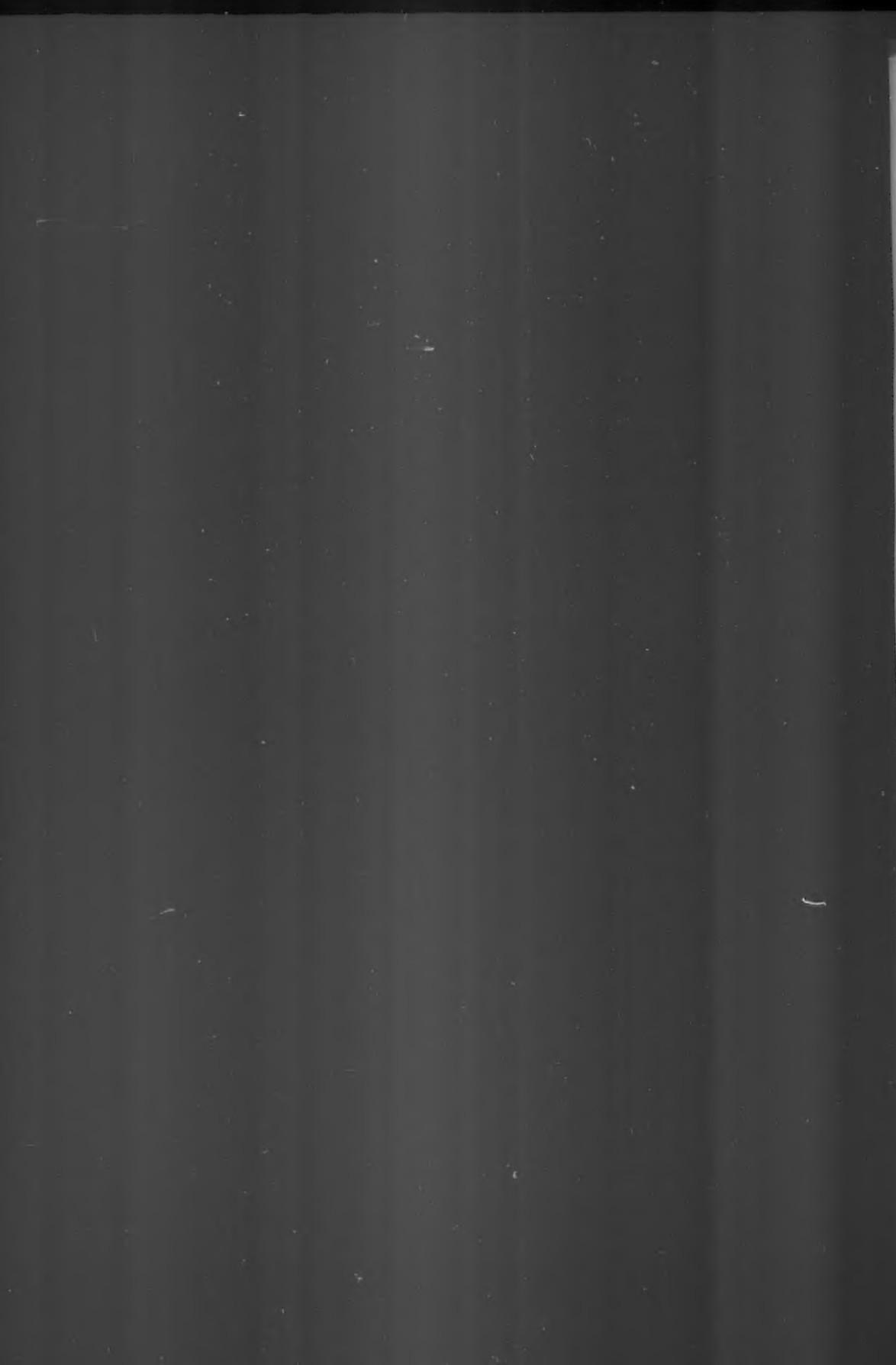
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Issued March 15, 1926

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PECULIAR NESTING SITE OF A DUSKY WARBLER

WITH FOUR ILLUSTRATIONS

By CLINTON G. ABBOTT

PRINTED reference to the nesting of the Dusky Warbler (*Vermivora celata sordida*) seems to be sufficiently scarce to warrant my recording a nest which came under my observation during the summer of 1924, particularly as the site was distinctly unusual. The Dusky Warbler, I might state, is a not uncommon resident of brushy canyon sides within the city limits of San Diego, even in sections



Fig. 22. DUSKY WARBLER, COSILY NESTLING IN THE MOSS AT THE BASE OF THE FERNS; SAN DIEGO, JUNE 14, 1924.

that are fairly well built up. The cheerful little trill of its song may often be heard in the spring, but its nest is hard to find and the one here illustrated is the only inhabited nest I have ever seen.

The peculiar location selected by the birds for this nest was a decorative fern basket inside a small lath house adjoining the home of Mrs. A. P. Johnson, Jr., at 2470 C Street, San Diego. According to information I secured from Mrs. Johnson

and from Albert M. Ingersoll, a Fellow of the San Diego Society of Natural History, selection of the lath house as a nesting location by the Dusky Warblers dated back to April, 1923, when a small, greenish bird sprang almost into Mrs. Johnson's face one day while she was watering one of the fern baskets. Peeping in, she saw the nest, which contained three eggs, cosily placed in the moss at the base of the ferns. She notified Mr. Ingersoll, who is well known to San Diegans as an authority on bird life,



Fig. 23. DUSKY WARBLER BEING PHOTOGRAPHED BY CLINTON G. ABBOTT.
THE NEST WAS IN A SWINGING FERN-BASKET INSIDE THE LATH HOUSE.

and he identified the bird as a Dusky Warbler. The eggs, he said, were very heavily incubated when he saw them in April, 1923. The young, according to Mrs. Johnson, left the nest either thirteen or fourteen days after hatching.

The following year, 1924, the birds made another nest in the same basket, adjoining the first nest. As soon as the new building operations were noticed, Mrs. Johnson informed Mr. Ingersoll, who kept the nest under observation and states that an interval of twenty-one days elapsed after the rim of the nest was formed before the first egg was laid. The bird laid only two eggs in this nest, which were duly hatched,

although the young were destroyed by some unknown enemy. The lath house was kept locked so that a cat was not responsible in this instance. The fact that the nest itself was not disturbed turned suspicion to a snake or a rat.

Later in the season (1924) the warbler built a new nest in another of the fern baskets and, as Mr. Ingersoll was out of town, Mrs. Johnson telephoned me at the Natural History Museum. It was certainly a surprise, when I visited Mrs. Johnson's home, to observe the strange situation selected by the birds. Her house is in one of the older residential sections of the city, known as Golden Hill. The homes here are large and surrounded by more or less extensive grounds, but the whole aspect is distinctly urban, with streets everywhere paved. Broadway, with double trolley tracks, is only one block away. The lath house, sixteen by twenty-four feet in size, was filled with a luxuriant growth of cultivated plants. A rectangular path within



Fig. 24. DUSKY WARBLER: THE BIRD SEEMED PRACTICALLY FEARLESS.

was marked at its corners by four wire fern baskets suspended about four feet from the ground. In one of these were the remains of the two previous years' nests, and in the basket diagonally opposite was the inhabited nest, which contained three eggs. Although the eggs were manifestly not fresh, there was no bird about and they seemed cool to my touch. I waited about for fully ten minutes and was beginning to fear that disaster had overtaken the home, when I heard a low, scolding note overhead. Then down from between the laths hopped the dainty little warbler, and, with no concern whatsoever, she took her place upon the eggs, although I was standing in full view close by.

Realizing that here was an unusual opportunity for photography, I returned with two cameras to the lath house on June 14, 1924, in company with Laurence M. Huey, of the Museum staff. As at the previous visit, the bird was not on her nest when we arrived, but she soon appeared and went unhesitatingly to her eggs. We then set up a camera on the tripod, and, with no concealment whatever, took all the photo-

graphs we desired. We soon discovered that not only was the bird practically fearless in the ordinary sense, but that she would even allow us to touch her without leaving her nest. She would permit us to raise her from her eggs with no greater protest than a pecking at the intruding finger. If she was not sitting sufficiently broadside for a good photograph, it was possible to arrange her the way we wanted her! Sometimes, if our familiarity was beyond her patience, she would merely hop among the foliage behind the nest, wait there for a few minutes, and then nestle back on her eggs. One usually associates "broodiness" with barnyard fowls, but this instinct is common to virtually all birdkind, and here, surely, was an instance of a tiny feathered being that was as broody as any old hen. Mrs. Johnson said that the warbler, on all her nests, became quite oblivious to frequent showerings from the watering can.

That the photographs we secured were not better than they are was due to no lack of accommodation on the part of our subject, but to the difficult light conditions. The natural light and shade of the lath house had to be screened for photographic



Fig. 25. DUSKY WARBLER: ITS NEST AND THREE EGGS DISCLOSED.

purposes, and the constant moving of the bird's head prevented an exposure of necessary length. Unfortunately our little friend was doomed to disappointment once more, for the young from these eggs were also destroyed (by an unknown enemy) before they left the nest. No young were therefore raised by these birds in 1924.

This year, 1925, the lath house was moved, but the Dusky Warblers were seen around, both at the location of the old lath house, and at the new lath house. However, no nest was found this year, although Mrs. Johnson thinks the birds may have built in a wisteria vine in her garden. As late as August 11, 1925, they were heard "chipping" as though they were tending young then. It might be added that throughout Mrs. Johnson's acquaintance with these warblers, she usually saw but one bird at the nest, but that when the young were on the wing, both parents raised a great disturbance.

San Diego, California, August 28, 1925.

THE POOL AN ATTRACTION FOR BIRDS
WITH ONE ILLUSTRATION
By FRANK N. BASSETT

MUCH has been written on how to attract birds about the home, but while a great deal of emphasis has been placed on the feeding table and the bird bath, we seldom see mentioned the use of an artificial pool.

It seems pretty well established that the abundance of birds in a given locality varies in proportion to the abundance of food, all other things being equal. The same rule might apply to the bird bath, and if so, the number of birds should vary in direct proportion to the size of the bath. With this in mind we built, in April, 1924, a pool with a surface area of forty square feet in our back yard, where a bath of two square feet area had been, with the hope that twenty times as many birds would visit it. Some attractions were added by way of aquatic plants, gold-fish, frogs, etc., and by making one end shallow enough for birds to use for bathing. The results far surpassed any hopes that we had entertained.

By the first week in May the plants had become well established and the water cleared, and on May 7 a family of young Western Robins bathed in the pool, as did also some young Alameda Song Sparrows. From this time onward the new visitors increased in quick succession and by June 1 the following birds had appeared: Coast Bush-tit, Yellow Warbler, Brewer Blackbird, California Brown Towhee, Western Chipping Sparrow, Oregon Junco, Russet-backed Thrush, Allen Hummingbird, Golden Pileolated Warbler, and Anna Hummingbird. The Brown Towhee appeared one morning at five o'clock and aroused the neighborhood by his repeated calls, resounding in the still-morning air like the tones of a minute steel anvil. He was discovered dancing up and down the curb of the pool, trying frantically to gather courage to jump in. Later the courage came and when it did it was superabundant. He would wet himself and actually squat in the water in utter abandon of all other interests for minutes at a time, allowing one to approach to within three feet of him. He appeared late in April and remained all summer and most of the winter, until Mrs. Bassett trapped and banded him. Such an indignity could not be endured and about a week later he disappeared and has not returned since.

Most of the birds came and bathed almost daily throughout the summer, but a few, the Yellow Warbler, Chipping Sparrow, Oregon Junco, and Russet-backed Thrush, were seen only once. The Pileolated Warbler remained about a week and then disappeared. The robins had nested in a park across the street, gathering mud for the nest at the pool. Later two pairs were discovered. Both remained throughout the summer and each raised two broods. This year only one pair returned, to our knowledge, but they raised four broods! The last brood left the nest August 23. This is the first time since we took up our residence here in 1914 that robins have nested or remained through the summer.

By September 1 four more visitors had arrived, in the following order: San Francisco Spotted Towhee, Cassin Vireo, Bullock Oriole, and California Jay. Two Cassin Vireos came on June 7 and both birds bathed by flying to the pool and dipping while on the wing, sometimes dropping perpendicularly to the water and at other times skimming the surface swallow-like. On June 18 a female and two young Bullock Orioles appeared at the pool. The young bathed and continued to do so almost daily for more than a month. The parent birds had nested in the park near

the robins, the nest being less than one hundred yards from the pool. This is the first appearance of Bullock Orioles in this vicinity since our residence here. They nested here again this year.

During early September (1924) Lutescent Warblers came, and this year they appeared in August. One was seen bathing by alighting on the water-lily pads, its weight forcing the leaf partly under water when it bathed in what was thought to be over-confident security. The only other bird seen to do this was a young song sparrow. But its weight being greater than that of the warbler, it sank the leaves deeper and the bird was compelled to hop from leaf to leaf in rather quick succession.

The arrival of the Western Flycatcher on September 16 marked the close of the summer season. It flew about the yard catching insects and drank from the pool, but bathed in the spray of the garden sprinkler by perching on the branches within

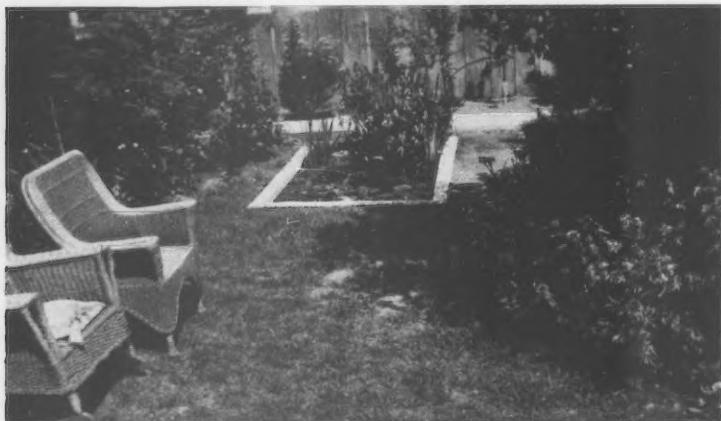


Fig. 26. THE POOL IN AUGUST, 1924.

the radius of the spray. This year it appeared the last week in August and was seen to bathe in the pool many times. Each time it darted from its perch to the water and, striking the surface with considerable force, bounded back to the perch. In comparison with the delicate and careful dipping of the Cassin Vireo the reckless plunges of this flycatcher reminded us of a small tern diving for fish. Once it struck the water and fluttering and splattering violently it actually "swam" for a distance of about a foot before rising.

Winter was officially opened on November 18 by the appearance of a Ruby-crowned Kinglet and an Audubon Warbler. The kinglet bathed in the pool by clinging sideways to the tule stems and fluttering the wings, first with one side towards the water and then the other. He had endeavored several times to bathe and each time was driven away by the warbler until he finally succeeded in evading his persecutor. A Dwarf Hermit Thrush came late in November, when the weather was exceptionally cold and the pool froze nearly every night for three or four weeks. On the morning after the first freeze the thrush was seen pecking at the ice, and a few minutes after I had broken it open he came back and straightway plunged into the chilly water and remained for two or three minutes, vigorously throwing the water

in all directions. Another thrush used to bathe very late in the evening, when it was so dark he could hardly be seen at a distance of thirty feet. Both birds remained through the winter. Then followed the Golden-crowned and Nuttall sparrows. Oregon Juncos had also appeared and about thirty of them were banded. A flock of Cedar Waxwings came and remained three days, stripping a large Pyracantha of its berries. They frequently drank from the pool but were not seen to bathe. Towards spring the Intermediate Sparrows closed the procession and from then till the present time a similar sequence to that of last year has occurred.

To one acquainted with the birds of this region there is nothing startling in the mention of the birds noted above. But of the twenty-four subspecies (twenty-three species) that appeared during the first year of the existence of the pool, twelve of them had never before been induced to come to the yard. No doubt they had been in the vicinity each year; but the pool was the magnet which drew them into the yard and gave us no end of entertainment and opportunity to study their behavior.

In the case of the robins nesting here it can hardly be claimed that the pool was entirely responsible, for the same season robins nested in several other parts of the city where they had never been seen before. The probable cause of this lies in the recent introduction of certain ornamental shrubs, of the berries of which they are very fond. The shrubs are Cotoneaster (several species) and Pyracantha angustifolia. The latter in particular is in very general use and the fruit is a bright-colored berry, ripening in the fall and remaining on the bush through the winter. Other species of Pyracantha are also used. The presence of so many of these shrubs attracts the robins here in winter in larger numbers than ever before, and their migrating instinct being comparatively weak, some of them find the place to their liking and remain to nest. The same may be said of the Dwarf Hermit Thrush and the Cedar Waxwing, for these also have been with us in increasing numbers the last two winters. All three of these birds are always seen feeding on the Pyracantha or the winter fruiting species of Cotoneaster. Unlike the robin, however, the latter two species are highly migratory and with the coming of spring they are stricken with this impulse and go they must, no matter what the inducements offered to keep them here.

Some of the foregoing observations were made by my wife, Lavina M. Bassett, as my own duties commanded my absence part of the time. She also banded most of the birds caught.

A word about the construction of the pool may not be amiss. On account of the small yard we were compelled to build the pool with vertical walls, a sort of a concrete tank sunk in the ground. A rectangular hole was dug about two and one-half feet deep and six inches of concrete spread in the bottom. A form was then built for the six inch walls, using the earth for the outside form, after which a plaster of cement and sand was spread on the walls and bottom. Then followed a coating of pure cement applied with a paint brush. Soil was then put in about a foot deep at one end, and sloping up to the curb at the other. A brick wall was placed across the middle to keep the sloping soil from sliding. The water was turned in, the plants put in place and time accomplished the rest. A far better and cheaper type is the saucer shaped pool, but considerable space is needed for it. By scooping a hole the desired shape, taking care that the slope from the center to the edge is very gradual, one can place the concrete without a retaining form; and by placing rocks around the edge and elsewhere a very "natural" effect can be attained with rushes and sedges and an irregular "shore line". This is the most desirable pool but it occupies considerable space. If water-lilies are desired in the center there should be about a foot of soil and a foot of water at that point. Care must be taken that the concrete is of

the proper consistency and the walls of sufficient thickness to insure against cracking. An inlet and outlet are not needed. The plants will oxygenate the water and the goldfish will devour all insect life including mosquitos. Aquatic snails and mussels will partly reduce the growth of algae, although some of this must be removed by hand in summer. On warm days evaporation will amount to as much as two inches or more. The garden hose may be used to refill and, if thought necessary, to overflow the pool for a short time. If the hose will reach from the pool to the cellar, by using a tub the water can be siphoned off once a year and the dead vegetation cleaned out. A disk or ball made of hardened plaster of paris dropped into the pool will help reduce the acidity of the water caused by decaying vegetation.

The pool, offering attractions to so many birds and insects and supporting so great a variety of aquatic plants and animals, is a decided success. It is a constant source of interesting happenings and pleasant surprises.

Alameda, California, November 6, 1925.

OUR BABY SONG SPARROW
WITH ONE SET OF FOUR ILLUSTRATIONS

By JOSEPHINE R. MICHENER

THE FOLLOWING account of the attempt to raise a young San Diego Song Sparrow (*Melospiza melodia cooperi*) which had been lost out of its nest long before it was able to fly, is given, not because our efforts were successful, but because success seemed so near until death brought sorrow to the household and because of the interest and affection the little bird commanded.

On June 23, 1925, one of the boys who live across the street brought us this baby bird which he had found on the ground in his front yard. Its only troubles seemed to



a



b



c



d

Fig. 27. VIEWS OF BABY SONG SPARROW.

- a. In front of mirror showing two views in one photograph.
- b. On boy's shoulder.
- c. Being fed bread and milk.
- d. Just posing.

be that it had no nest, no parents, too few feathers and insufficient strength even to hop on the ground. We fed it bread and milk and put it in a small cage where it seemed contented. The feeding was repeated at frequent intervals. Soon an adult song sparrow was noticed near by. It was talking excitedly, as parent birds do when

something has happened to their young. That night we covered the cage containing the small bird with a cloth and placed it on a screen porch, and in the morning we found the parent bird there with it, having come in through a hole in the screen. We caught the parent and found it to be wearing band no. A14368, which proved it to be the first song sparrow we had banded when we began banding on November 2, 1924. Previous to that this bird had been banded by us on September 9, 1924, with a band of fine copper wire. It had repeated in our traps on November 27, December 28, January 9, 10, 12, February 6, 10, 20, April 8, 25, May 22, 24, June 12, 19, 21 and 22.

After releasing the adult bird, the young bird was put outside on the ground in a small cage made of three-quarter inch mesh poultry wire, in the hope that the old bird would feed it. Two adult birds came near and displayed much interest, but they did not feed the young one so far as we could tell. We were afraid that cats would get the young bird if it were left unattended in this position very long, so it was returned to its original small cage and the feedings of bread and milk were continued. It ate quite readily and often, and grew stronger rapidly.

It was kept out in the yard nearly all the time so that the parents would retain their interest in it and be ready to guide it in bird lore when it became strong enough to fly. But it would not eat well outside the house because the parent birds would talk to it and make it more interested in trying to fly away than in eating. In the house it would eat eagerly and then snuggle down and shut its eyes for two or three minutes. Then it would awaken and be normally active for half an hour or so before begging for food again.

After three or four days it was put out in the cage of three-quarter inch mesh again, to see if the parents would feed it. Somehow it escaped from this cage and we spent most of the day hunting for it. It was not yet able to fly well enough to get up out of the way of cats, so that it would almost certainly have perished if we had not found it. Finally, after a very minute search, directed by the chipping of the parent birds, it was found beneath some shrubs and taken back to its cage. This convinced us that we would have to accept the sole responsibility of feeding it until it could fly.

Before many days it would beg for food by voice and quivering wings every time I would come near its cage, unless it had just been fed. As it grew stronger and its feathers developed it began to try to fly—first a few inches from one hand to the other and then farther and farther, always to something higher than the perch upon which it was standing. It particularly liked to hop onto my hand and up my arm a few inches at a time until it reached my shoulder, and then to snuggle close to my neck under the brim of my sunshade hat. It never moved from there of its own accord. It became very friendly with me, and when out of the cage it would fly toward my face or shoulder, one time actually flying right against my face.

When we first began to feed it, it did not want the drops of water I offered it on the tip of my finger, but before many days it would at times beg for water and would not be satisfied with food until it was given the water, always a drop at a time. When given a dish of water, for the first time on the fifteenth day, it gave a little chirrup and hopped into the middle of the water and took a bath, then sat on a twig that was in the cage until it was dry. No instructions from a parent bird were necessary.

We had been wondering for several days how soon it would be safe if released into the shrubs and trees of the yard. On the evening of the sixteenth day it was

left until late in a large cage on the porch, when we decided that it was not very well protected for the night. I took it hurriedly in my hand, without thinking to give it any warning, and put it in the smaller cage. It was very much frightened, because it had been sleeping so soundly, and screamed piteously; but there seemed to be nothing that I could do to help matters so I left it, thinking that I had done it no real harm. The next morning it was dead, scared to death, we believed. It had seemed perfectly healthy all the time we had it and was thriving well on the care it was getting. There was real sorrow for all of us that morning. Our only consolation was in the thought that we had surely prolonged the little bird's life and that we had tried to give it a good start.

Pasadena, California, August 10, 1925.

ACORN STORING METHODS OF THE CALIFORNIA AND LEWIS WOODPECKERS

By CHARLES W. MICHAEL

SINCE the spring of 1920 I have been a resident of Yosemite Valley. With me the study of birds is a hobby, and during all of the six years of my residence seldom a day passed that I did not walk out to visit with the birds. Now, when I first came to the Valley I noticed pine trees here and there among the Kellogg oak groves, that had been used as storage, or cupboard trees, by the California Woodpeckers (*Melanerpes formicivorus bairdi*). Living trees two hundred feet high were "pock-marked" by the drillings of these birds, sometimes to the extent of half their height. The pits to receive the acorns were drilled on an average of four to each plate of bark.

At the time when I first discovered and examined the trees there were no acorns in storage. This did not seem strange at the time; I merely thought that the food supply had been consumed during the winter and that during the following fall the cupboard trees would again be stocked with acorns. Such was not the case, however, for although fall came with a bountiful crop of acorns, the woodpeckers made no attempt to harvest extensively. The great granaries were utterly ignored and but desultory storing was practiced. To receive the few acorns that were stored dead branches among the oaks were utilized by most of the birds, while a few individuals conceived the idea of poking acorns away in the cracks formed by the double shingles at the eaves of nearby dwellings. Each following year it was the same thing, no extensive storing of acorns. Then came the fall of 1923 with a complete failure of the acorn crop of both Kellogg and golden oaks. Owing, then, to this crop failure, and also to the fact that there had been no excess storing during the preceding years of plenty, the California Woodpeckers, for lack of food, were forced during the winter of 1923-24 to leave the Valley. Three birds did winter through, but only by the generosity of Bob Selby who kept them supplied with bread and suet.

The following spring the California Woodpeckers returned to the Valley and during the summer they were as numerous and noisy as ever in all the Kellogg oak groves. This fall (1925) the Kellogg oaks again bore a heavy crop; and for the first time we found the woodpeckers, at least a few individuals, taking full advantage of the opportunity to store. The great cupboard tree, a yellow pine that stands among the oaks at the edge of the Kenneyville field, was the tree that received the most attention. Starting at about fifteen feet above the ground the bark of this tree was literally riddled with holes for a distance of a hundred feet. Many of the holes were of this year's drilling, others were old holes that had done service at some time in the past. November 7, when last I examined this tree, it was estimated that seventy per cent of the holes were being utilized. I cannot be sure, but after many visits to the tree I am inclined to think that the vast storing of acorns was the work of a single pair of birds.

When I visited the storage tree in rainy weather I never found any California Woodpecker at work, but the one I took to be the owner of the vast store could usually be found looking out of the door of his bed chamber high up in a pine. And, by the way, his bed-room was located directly opposite the storage tree, and from the doorway was to be had a commanding view of all his stores.

There were a number of fat years when no extensive storing was done. There was one lean year when no storing could be done. From the above observations one

might conclude that an abundance of acorns is not directly responsible for prodigious storing. In a land of plenty the necessity of laying aside stores for future consumption is obviated. It is the barren years that teach the value of thrift. Intelligence plus experience may well have been the cause of the excessive storing of this year. A few of the more intelligent woodpeckers that were forced last winter to abandon the Valley for lack of food are now preparing against the next lean year.

Regarding the food storing habits of the California Woodpecker it might be well to mention that these birds here in the Yosemite Valley show a decided preference for the acorns of the Kellogg oak, and it is only when there is a shortage of this nut that the nut of the golden oak is stored at all. The acorns of the Kellogg oak vary greatly in size, and this being the case the woodpeckers can drill holes to fit the average sized acorn with the assurance that a slight variation in the size of the hole may easily be overcome by the selection of the proper acorn.

Like the California Woodpeckers and the Indians of Yosemite, the Lewis Woodpecker (*Asyndesmus lewisi*) is also a storer of acorns, and he too prefers the acorns of the Kellogg oak. His method of storing acorns, however, is quite different from that employed by the California Woodpecker, as the following notes indicate.

Recently we watched a Lewis Woodpecker making trips back and forth between a Kellogg oak and his home tree, a cottonwood. He was busy storing away his winter supply of acorns. Occasionally he picked a fallen acorn from the ground; more often he flew into the lesser branches of the oak, and hanging like a great black chickadee he plucked the acorn from the cup. With crow-like flappings, his broad wings carried him back to the dead cottonwood with his prize in his bill. Alighting somewhat below the summit of his tree he would, by a series of flight jumps, come to a certain shattered stub where a fissure formed a vise. Into this he would wedge the acorn.

With the acorn held firmly in place he would set about cutting away the hull, and strong strokes of his bill would soon split away the shell and expose the kernel. But he was not satisfied in merely making the kernel accessible, he must go on with his pounding until he had broken it into several pieces, and then with a piece in his bill he would dive into the air like a gymnast, drop twenty or thirty feet and come with an upward swoop to perch on the trunk of the same tree. A few hitching movements would bring him to a deep crack that opened into the heart of the tree. Here he would carefully poke away, for future reference, his morsel. Usually the acorn was cut into four parts, involving four such trips, and on the last trip to the vise he would take the empty hull in his bill, and with a jerk of his head, toss it into the air. An examination of the ground beneath the tree disclosed hundreds of empty acorn shells. Holding a watch on the Lewis Woodpecker, we found that he made five trips in five minutes and stored five acorns.

On another occasion, on a sunny day in the late winter, we paid a visit to the Lewis Woodpecker that lived in a dead cottonwood in Leidig Meadow. When we arrived the bird was busily engaged in some unknown occupation in his home tree, an occupation that was apparently in some way connected with his commissary arrangements. With his bill he would withdraw small objects from secret crevices in the dead wood. One by one he transferred these small bits of yellow material from the original hiding place to niches farther up the tree. At the time of this visit we were mystified by the behavior of the bird, but since getting better acquainted with the Lewis Woodpecker we are inclined to think that he was airing and sunning his acorn chips to prevent mold.

Yosemite, California, November 30, 1925.

A FIRST EXPERIENCE IN BIRD BANDING

By JOSEPH MAILLIARD

ALTHOUGH sundry urges from the United States Bureau of Biological Survey and from the much esteemed editor of the Bird Banding Department of THE CONDOR have been expended upon me in the hope of inducing me to take up the work of bird banding, conditions under which I have been carrying on my field work did not seem to permit of this being done. In the California Academy of Sciences itself curatorial and other work takes up so much of my time that it is impossible to attend to the trapping of birds in Golden Gate Park, or even close by around the Academy building there.

In September, 1924, while I was doing some field work in Surprise Valley, Modoc County, California, such numbers of the Gambel Sparrow (*Zonotrichia leucophrys gambelii*) appeared that it struck me as a great pity that no preparation had been made to band this species under such favorable conditions. But traps and bands were wanting and there was other work to be done. At the time of my arrival, September 3, many of these sparrows were already present and they rapidly increased in numbers until there was a good sized flock every hundred yards or so along the county road wherever there was a sage-brush border. There were also many other flocks in suitable places away from the road. The year 1924 had been a year of severe drouth following two years of partial drouth, but there was yet some water in Surprise Valley and a better crop of grass and grain than in most places in northern California. Of this the sparrows were taking advantage and there were more of them in this valley than I had ever before seen anywhere.

The year 1925 was practically a normal one in Modoc County as regards rainfall, and I revisited Surprise Valley in the fall to find out what took place there in an ordinary season. It turned out that bird life, according to residents, had been abnormally abundant in the dry year of 1924 but was the opposite in the normal year of 1925; so much feed had been produced in the latter year that the birds were widely distributed along the general line of migration and were in no hurry to be on their way south. This year but few migrants were seen in the valley at the date of my arrival, September 8, and there were no Gambel Sparrows noted for several days thereafter. In fact it was not until September 23 that there seemed to be enough present in any one place to make it worth while to begin the work of banding, for which I had this time come to some extent prepared.

Not knowing whether there would be enough sparrows migrating through Surprise Valley in a normal year, I had not sent for any extra supply of bird bands of the proper size for the genus *Zonotrichia* and had with me only seventy-five that would do for these sparrows, having believed from the past year's experience that there would be plenty of time to send for more if conditions would warrant so doing. The lateness of arrival of the migrants in 1925 was disappointing but not fatal to this plan.

Of traps, I had with me three of the regular double-enders and two 3 by 4 foot funnel-door traps of wire screening, somewhat modified from those described by Mr. G. D. Sprot in the Canadian Field-Naturalist (vol. 38, September, 1924, p. 136). The modification consisted in just cutting the trap to the pattern, transporting it flat, bending the sides into shape only as used, and then fastening the corners with string

or fine wire. At first the funnel-door traps did not seem to meet with favor on the part of the birds and, not being able to buy in Surprise Valley the proper sort of wire screen for traps, I cut off part of one of these and made with the wire two more double-enders. As, however, about the time these two were made the birds had gotten over their fear of the funnel-door idea and were freely entering the trap left in the field, I managed to cobble the remainder of the mutilated trap into a smaller one and again put it into commission. It was made with a floor and one side of wood and was never as popular with the birds as the larger trap that had no bottom. Also it was so small that some birds found their way out of the small end of the funnel and escaped. Later on, another of these traps was contrived from the rusty remains of an old woven wire mattress. It had a wooden frame but no floor and worked very well. Finding on a ranch enough screen, I made two more double-end traps, which brought the total number of traps up to nine. This was about all that I could attend to on busy days.

A half mile north of Eagleville there was a narrow fenced-in lane leading from the main road back to a brushy foothill pasture and to the mountain trail in the mouth of Raider Canyon. This lane was about one-third of a mile long, and it had a wagon track running through it, with heavy sagebrush between the track and the barbed wire side fences. Beyond these fences the fields had long ago been cleared and in them was no cover for birds. In 1924 this lane was alive with Gambel Sparrows and I had picked it out as an ideal place for banding birds, but in 1925 the sparrow population was at first a very small one and there were no other flocks within half a mile, to work in conjunction with it.

My first idea was to scatter traps all along the length of the lane, but I found that it was best to concentrate them in the central part. The sparrows had a way of just flying a little way ahead, from bush to bush, as the traps were examined and the contents attended to, so that when the end of the trap line was reached, in either direction, there was still along the lane a lot of undisturbed cover in which most of the birds quietly remained. After resetting the last trap all I had to do was to walk a little way out into the open field at right angles to the lane, then parallel to it until the end was reached, return to the lane and simply herd the birds back over the traps again, alternating ends and making it a continuous performance. It was what is colloquially termed a "snap". In order to allow the birds to settle down a bit, after being disturbed, ten or fifteen minutes between turns were devoted to writing up the record cards for the numbers used in banding, so no time was lost.

At first, banding was done only in the mornings, but even then the seventy-five bands were used up on the fourth day. As soon as it was seen that there were enough sparrows coming in to make it worth while, a wire was sent to Mr. W. C. Henderson, Acting Chief of the Bureau of Biological Survey, requesting him to send 300 bands by quickest way. Mr. Henderson kindly acted with the utmost promptness and the bands arrived on September 30, leaving me only four days without any. Meanwhile the ground had been given a daily baiting and banding was resumed on October 1, the work being carried on up to 11 A. M., and from 2 to 5 P. M.

This lane, called the Minto Lane for convenience sake, because it bordered the Robert Minto place, was worked until the evening of October 3, when there were so few new birds taken and so many repeats that it was decided to move the traps to the McCully Ranch, a mile farther north. Here they were placed in an enclosure free from stock and cats. Part of this was used this year as a potato patch which was bounded on three sides by a very heavy hedge of wild rose that had grown up over

the old wire fence. This hedge was some ten or twelve feet high and about twenty feet wide, making an ideal refuge for birds. Six traps were placed under the edge of the hedge inside the potato patch and three outside. They were baited that evening but not set. Early next morning they were rebaited and the triggers set.

The birds were very wary on that day and only eighteen were taken, but by October 5 they had lost their shyness and sixty-seven Gambel Sparrows, with one Modoc Song Sparrow, were banded. The song sparrow was in a dark place early in the morning and I inadvertently slipped on the band and closed it before noticing that the bird was not an immature Gambel Sparrow. October 6 it rained hard all day, but stopped in the evening. The next day was very cloudy and but few birds came to the traps in the early morning, doing well later on. Also two Golden-crowned Sparrows (*Zonotrichia coronata*) and one Warner Mountain Fox Sparrow (*Passerella iliaca fulva*) were secured. The latter was not banded. In the afternoon of that day, however, there were so many repeats that the traps were moved back to the Minto Lane, to see what was going on there and whether any new birds had come in. The result of the next day's work, October 8, showed that most of the birds had moved on after the rain storm; for only twenty were banded and five repeats taken. One of these was a bird banded on September 27, but the others were of recent take. The catch was poor here, and there being no other flocks within four or five miles, on land free from disturbance by live stock or cats, the traps were moved that evening back to the McCully place. On October 9 there were banded twenty-four Gambel and two Golden-crowned sparrows, but toward the end of the day the repeats were so constant that the traps were transferred to the orchard by the McCully house, where a number of sparrows had been seen, and placed in spots favored by the birds.

On October 10 there were a good many sparrows in this orchard, but the heavy rain had sprouted so many weed seeds that the birds preferred scratching for these rather than accepting the bait that was offered them. They would fly down from an apple tree and light on the ground all around a trap, but would work away from it in place of gathering the bait scattered before the doors. On this day only eleven Gambel Sparrows and one Golden-crowned Sparrow were taken, with a few repeats. One of the latter was a bird banded in the Minto Lane, a mile south, being the only case noted of other than very local wandering. On October 11 a rain commenced, mingled with snow, that lasted for two or three days, leaving quite a fall of snow on the higher elevations, after which so few sparrows remained in the vicinity that banding was given up.

This banding work was well worth while if only for the taking of the Golden-crowned Sparrow in migration, which proved conclusively that the previous meetings with this species in Modoc County (Mailliard, Condor, xxvi, 1924, p. 214) were not merely incidental. It was singular that so few birds other than the Gambel Sparrow entered my traps. Besides the three species already mentioned the only others caught were four or five Nevada Towhees (*Pipilo maculatus curtatus*) and one Green-tailed Towhee (*Oberholseria chlorura*). It is true that there were not many other species present of a sort that might go into the traps after grain food, but there were a good many song sparrows at the McCully Ranch, of which only three or four were taken, and quite a number of the Nevada Towhees were present in both the localities where the trapping was carried on. Following is a list of the birds banded.

	IN MINTO LANE				
	Adult	Immature	No. banded	Repeats	Total takes
Sept. 23	2	3	5	---	5
Sept. 24	2	9	11	1	12
Sept. 25	3	7	10	4	14
Sept. 26	18	13	31	7	38
Sept. 27	13	5	18	---	18
Oct. 1	21	18	39	12	51
	1 (age?)	---	1	---	1
Oct. 2	22	27	49	8	57
Oct. 3	15	11	26	14	40
Oct. 8	3	17	20	5	25
	100	110	210	51	261
	McCULLY RANCH				
Oct. 4	11	7	18	---	18
Oct. 5	41	27	68	4	72
Oct. 7	37	18	55	35	90
Oct. 9	12	12	24	33	57
Oct. 10	5	7	12	1	13
	106	71	177	73	250

Percentages of adult and immature birds: Adult, 54.5; immature, 45.5. The band numbers used were: 115156-115205, 81236-81260, 169701-170000, 171001-171012; total, 387. Included in this total are: Modoc Song Sparrow, 169854, banded October 5; Golden-crowned Sparrows, 169937 and 169951, banded October 7, 169978 and 169987, October 9, and 171001, October 10. The remainder are all Gambel Sparrows.

The bait used was a mixture of broken wheat screenings and refuse screenings from the local mill. The broken wheat screenings consisted largely of grain, but the refuse screenings were mostly weed seeds and trash and would be bad to use on clean ground. Bread crumbs were at first added to the bait but did not seem to add to its attractiveness and so were finally discarded.

California Academy of Sciences, San Francisco, November 16, 1925.

WILLIAM C. BRADBURY

WITH PORTRAIT

By J. D. FIGGINS

THREE is an old saying to the effect that we never know a man until we have camped with him and experienced discomforts and disappointments in an environment where superficialities are dispensed with and the inner man comes to the surface. Such were among the conditions under which I knew William C. Bradbury, whose death occurred on October 3, 1925.

I became acquainted with Mr. Bradbury in 1913 when he visited me in my office at the Colorado Museum of Natural History, and, in his direct method of procedure, explained his retirement from active business and a desire to renew his boyhood hobby of collecting birds' eggs. A second visit from him resulted in his proposing that he acquire the small collection of eggs belonging to the Museum and, in return, that he supply representative sets of all the North American species and subspecies he could obtain. That plan was carried out shortly thereafter, and from that date until his death Mr. Bradbury's energies were centered in enlarging the collection and acquiring local rarities.

In 1914 Mr. Bradbury was unanimously elected to membership on the museum's Board of Trustees and in the same year he was appointed Honorary Curator of the Department of Oology; through those connections I came in frequent contact with him, which ultimately led to a close and intimate friendship. Having many interests in common, I lost no opportunity to accompany him on his excursions afield and there learned the splendid character of the inner man; and there, too, I was constantly reminded that when the West acquired a great builder it was at the expense of science, for I have never known a more enthusiastic worker in his chosen field, or one more insistent upon absolute accuracy. This latter trait was frequently illustrated.

On one occasion some of the young men from the museum accompanied Mr. Bradbury for field work, something they viewed as a great privilege, and in collecting a set of Rosy Finch eggs from a particularly difficult position, one of the eggs was damaged. Noting Mr. Bradbury's disappointment, one of the inexperienced young men suggested throwing it away, and that the remaining eggs would then make a perfect set. He has frequently referred to Mr. Bradbury's comments regarding such a procedure, which left no shadow of doubt that such practices were not approved of.

On another occasion a shipment of eggs was received about the time Mr. Bradbury learned that the source from which they were obtained was not altogether reliable. They were a purchase that amounted to more than two hundred dollars, but after looking them over and referring to a letter on the subject, he crushed each set and threw them in the waste basket with the remark, "Now there is no question about them."

Born in Taunton, Massachusetts, on February 1, 1849, Mr. Bradbury developed an early interest in the subject that was to have his undivided attention during the years following his retirement from business. Learning that fully developed eggs were occasionally found in cleaning the Passenger Pigeons arriving at the Boston market, he paid frequent visits to those places and through that source obtained a profitable medium of exchange with other boys similarly inclined. Of greater interest, however, is the fact that the collection of eggs made by Mr. Bradbury during that period was kept intact throughout the busy years of his life and will remain undisturbed in the Colorado Museum of Natural History.

At the age of twenty-two, or in 1871, Mr. Bradbury came to Colorado, where he found an outlet for a superabundance of energy on a large cattle ranch on the Platte River, below the present town of Evans. Delightfully droll and amusing were the many stories he told of that period, and his keen sense of humor was fully illustrated in the fact that he was frequently the "victim" in these tales. Fresh from the east, he was surprised at the absence of butter and cream on the table, although there



Fig. 28. WILLIAM C. BRADBURY.

were hundreds of cows on the ranch. Sensing an opportunity for large enjoyment at Mr. Bradbury's expense, some of the seasoned cowpunchers proceeded to bait him into the agreement that he would do the milking if they would bring the cows in from the range. On numerous occasions I tried to get the details of the experiment, but the invariable answer was a reminiscent smile and the comment that there was butter and cream on the table with satisfactory regularity thereafter. It was typical of Mr. Bradbury, for rarely did he mention circumstances connected with methods. When an undertaking was accomplished it was at once dismissed and seldom referred to again, unless some other subject related to it.

On October 27, 1872, Mr. Bradbury married Miss Hattie A. Howe, daughter of Buckley H. and Elizabeth A. Howe, pioneer settlers in the vicinity of Evans,

Colorado, and shortly thereafter he took up residence in Colorado Springs. There he developed a large commercial business, but finding this far too confining and irksome, he started a freight and passenger service between Colorado Springs and Leadville. When the Colorado and Southern Railway extended its line to Leadville freighting was at an end, and Mr. Bradbury then turned to contracting on railroad building and large projects of irrigation. Colorado, Texas, New Mexico, Arizona, Mexico, Idaho, Wyoming and Utah became scenes of his activities. This, and the development of 37,000 acres of raw prairie land into orchards and alfalfa fields held Mr. Bradbury's undivided attention until the time of his retirement. While the enlargement and enrichment of his egg collection was given first place, and claimed a large share of his time since that date, Mr. Bradbury was interested in every phase of the Museum's efforts. This was frequently illustrated in the most substantial manner.

Holding to the highest ideals of sportsmanship, Mr. Bradbury maintained a keen interest in hunting and fishing, but the thought uppermost in his mind was moderation. He was a member of several clubs devoted to those pastimes and held to the belief that propagation was as much a duty as taking game was a pleasure. It was through his efforts that the Scaled Quail was introduced in the vicinity of Colorado Springs, from which point these quail have since spread over a large portion of the upper Arkansas River valley.

At the time of his death Mr. Bradbury had made no provision for a disposition of his large personal collection of North American birds' eggs, but, being aware of his plans and in fullest sympathy with their object, Mrs. Bradbury generously donated the collection, together with a valuable library, to the Museum. Mr. Bradbury's death marks a serious and permanent loss to the Museum. Such it is also to a large number of individuals, the writer being among them.

Denver, Colorado, December 11, 1925.

NOTES ON THE STATUS OF THE PEALE FALCON

WITH ONE ILLUSTRATION

By ALLAN BROOKS

THE RANGE of the Peale Falcon (*Falco peregrinus pealei* Ridgway) as given in the A. O. U. Check-List, 1910, reads "Pacific coast region of North America from Commander and Aleutian islands to Oregon. Breeds throughout its range." On the strength of this all peregrines from the northwest coast are ascribed to *pealei* by most collectors. As the majority of these birds are indistinguishable from eastern falcons there is a natural tendency to discredit the form *pealei*.

There is, however, a well marked form resident in the Queen Charlotte Islands (and on the southern islands of the Alaskan coast ?) west through the Aleutian chain to the Commander Islands. North of this, over nearly the whole of Alaska, only *Falco peregrinus anatum* occurs. I have seen no breeding birds from Vancouver Island, but the winter birds and migrants there are *anatum*. Two breeding adults from the northwestern coast of Washington, that I have seen, are also indistinguishable from *anatum*, as are all the specimens I have examined from the interior. The juveniles of all these are dark, but not more so than dark juveniles from the Atlantic coast. I have not seen the type of *pealei*, described from a juvenile bird, but the characters assigned to it are inconstant when applied to any series of northwestern birds.

On the Queen Charlotte Islands the Peale Falcon is probably more abundant than peregrines are anywhere else in the world. On North Island in the breeding season one is never out of hearing of the birds. Sometimes three broods of fledglings can be heard calling from one vantage point, and probably thirty-five pairs nest on the twenty-five miles of coast-line of this small island alone. Here is an excellent opportunity to study the variation in the young; and while all are dark, few show the absence of rufous margins to the feathers of the mantle, supposed to be the diagnostic feature of *pealei*. Many of the juveniles also show the buffy-colored head in contrast to the dark body; each brood, however, is true to one type. The only character that may possibly separate juvenile *pealei* from dark juveniles of *anatum* is the hair-line striping of the throat and chin; this extends right up between the rami of the mandible in all the juveniles I have in my own collection, some fifteen in all; while in all juvenile *anatum* that I have been able to examine the upper portion of the chin is immaculate.

The breeding adults from the Queen Charlottes are as a rule very heavily and handsomely marked below, especially in the females. Some show even as much barring as in the ultra-typical birds from Bering Island collected by Stejneger, this barring extending right up onto the jugulum in the form of heavy "tear drops" and even bars. Such birds constitute the extreme of differentiation of the *peregrinus* group, only equaled by the strongly characterized *melanogenys* of Australia.

The only Atlantic specimen that I have seen that has a heavily marked jugulum is an adult female in the National Museum from the mouth of the Whale River, Ungava. This bird might well represent *pealei*; but whether a straggler of that form, or only a mutation of *anatum*, or, quite possibly, *peregrinus* from the Old World, is only of course conjectural. In the British Museum there are no specimens of *pealei*; two birds purchased from an American collector for that form are only *anatum* from central Alaska, the male in fact ultra-typical of that subspecies with a large portion of the lower surface immaculate.

My conclusions as to the range and characters of the heavily marked peregrine of the North Pacific now called *Falco peregrinus pealei* may be summarized as follows. It is characterized by a very heavily marked under surface in the adult and possibly greater size than in *Falco peregrinus peregrinus* and *F. peregrinus anatum*. The markings in the adult female extend up onto the jugulum in the form of tear drops and bars, not hair lines or narrow lanceolations as in other forms of *peregrinus*. In the adult male the markings are not so pronounced, but the whole lower surface is usually dusted with dark gray in addition to the bars. There is very little rufous on the lower surface in either sex. The young are very dark and may or may not have rufous edgings to the feathers of the mantle; they can be matched almost exactly by dark juveniles from the Atlantic coast.

The range is the North Pacific islands between latitude 50° and 55°, from the Skeena River mouth (British Columbia) to the Commander Islands (and adjacent coast of Kamchatka?). Probably resident throughout its range.

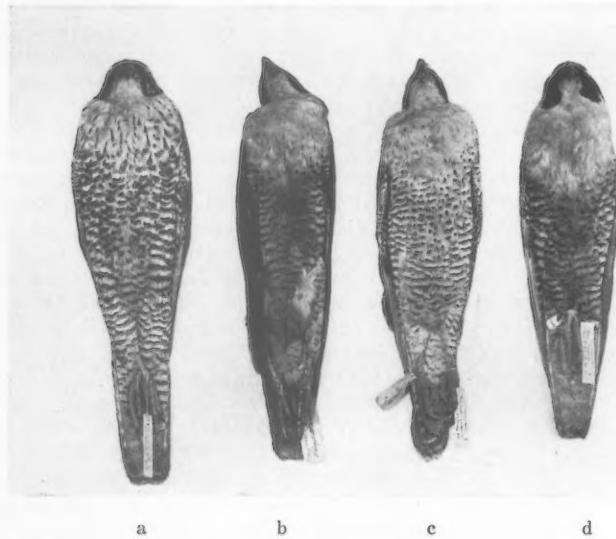


Fig. 29. FOUR SUBSPECIES OF PEREGRINE FALCON:

- a. *Falco peregrinus pealei*, ♀ adult; Queen Charlotte Ids., B. C.
- b. *Falco peregrinus peregrinus*, ♀ adult; Islay, Scotland.
- c. *Falco peregrinus callidus*, ♀ adult; Astrakhan.
- d. *Falco peregrinus anatum*, ♀ adult; Gardiner's Id., New York.

If this characterization be accepted, the form will require a new name, as it is quite distinct from the breeding form of the Washington-Oregon coast, the type locality of *Falco peregrinus pealei*. Adults and young from this region can be exactly matched in any series of eastern *anatum*.

The situation is very similar to that of the goshawks of the west. The characters on which the subspecies *Astur atricapillus striatus* and its synonym *henshawi* are based are only those of age, and the juveniles are only slightly if at all differentiated from eastern birds. But on the Queen Charlotte Islands and the islands of the lower Alaskan coast occurs a dark form of the goshawk with an extremely dark colored juvenile. Migrants from northern Alaska of the ordinary *atricapillus* type migrate through its range, just as light-colored peregrines of the typical *anatum* type may be found migrating through the breeding range of the heavily spotted peregrine now known as *Falco peregrinus pealei*.

MEASUREMENTS OF *FALCO P. PEALEI* FROM THE QUEEN CHARLOTTE ISLANDS

	Wing	Tarsus	Middle toe without claw
Average of 4 males.....	335	48	48
Maximum	340	52	49
Minimum	332	46	47
Average of 7 females.....	372	57	56.5
Maximum	377	60	58
Minimum	367	54	54

Besides the material in my own collection I have been able to examine the series in the British Museum, the U. S. National Museum, the American Museum of Natural History and the Museum of Vertebrate Zoology, as well as several other collections with smaller series. These notes are not written with any idea of finality but with the hope that they may induce a better conception of the situation.

Nanaimo, B. C., November 29, 1925.

THE CRAVERI MURRELET IN CALIFORNIA

WITH ONE ILLUSTRATION

By A. J. VAN ROSSEM

SOME years ago the writer recorded (*Condor*, xvii, 1915, pp. 74-78) the presence of what he believed to be Craveri Murrels from the vicinity of Los Coronados Islands, off San Diego, California. The occurrence so far north of birds exhibiting the characters ascribed to *Brachyramphus craverii* (Salvadori) led Dr. Joseph Grinnell to suggest (*Pac. Coast Avifauna*, no. 11, 1915, p. 175) that this supposed species might prove to be merely an age variation of *Brachyramphus hypoleucus* Xantus, the species breeding on the Pacific coast of northern Lower California and southern California.

Recently a series of breeding *craverii* has become available for study. In April, 1925, the writer collected sixteen adults and eight downy young of this species in the northern part of the Gulf of California. There are also at hand four adults and one downy young from the southern part of the Gulf, taken by Mr. Chester C. Lamb, and now in the collection of Dr. Louis B. Bishop.

In view of the confusion caused by the northern occurrence of *craverii*, a review of all the murrels of the *Endomychura* group in California collections seemed advisable. A total of 152 specimens was assembled from the following sources: Dr. Louis B. Bishop, 18; California Academy of Sciences, 35; Donald R. Dickey, 48; Laurence M. Huey, 16; Los Angeles Museum of History, Science and Art, 2; Museum of Vertebrate Zoology, 30; San Diego Museum of Natural History, 1; L. E. Wyman, 2.

The only sex difference in either species proved to be the slightly larger average size of the females. As to age, there is no apparent difference between birds of the year, subsequent to the post-juvenile molt, and fresh fall adults. In many of the molting specimens of *hypoleucus* enough of the old plumage remains definitely to establish their ages. In the case of *craverii*, most of the available birds had finished molting at the time of capture, but in 42 out of a total of 86 examined, sufficient evidence remained to give at least a clue as to age. Since no difference was discernible between the definitely known post-juvenile and adult plumages of either species, it seemed permissible to use birds of undeterminable age for purposes of comparison.

The two species are perfectly distinct. The three primary characters which distinguish them are the bill shape, the color of the wing lining, the exposed parts of which are always pure white in *hypoleucus*, and grayish white with a variable amount of darker mottling in *craverii* (see *Condor*, xvii, 1915, pp. 74-78), and the color of the inner webs of the distal primaries, which are white in *hypoleucus* and light brown in *craverii*. In addition, three other characters are diagnostic in most cases, and may be called positive characters if birds of similar age and wear are compared. *Craverii* is much browner than *hypoleucus* in fresh plumage. In very worn plumage, this difference is somewhat obscured, but it is usually noticeable even in this stage. The lateral outline between the dorsal and ventral plumage usually furnishes an additional distinction, as indicated in the accompanying illustration. This difference is probably constant in life, but the distortion of made-up skins occasionally minimizes or exaggerates this difference. *Hypoleucus* in fresh fall plumage has the feathers of the sides broadly tipped with white. The best-marked specimens never lose this character altogether, but as a rule it nearly or quite disappears in worn breeding birds. Juveniles of *hypoleucus* do not possess this white tipping at all. Specimen no. 15,820 of the

collection of the California Academy of Sciences, mentioned by Beck (Proc. Calif. Acad. Sci., 4th Series, III, 1910, p. 60) as showing the combined characters of the two species, proves to be a perfectly normal juvenal specimen of *hypoleucus*, with the white-

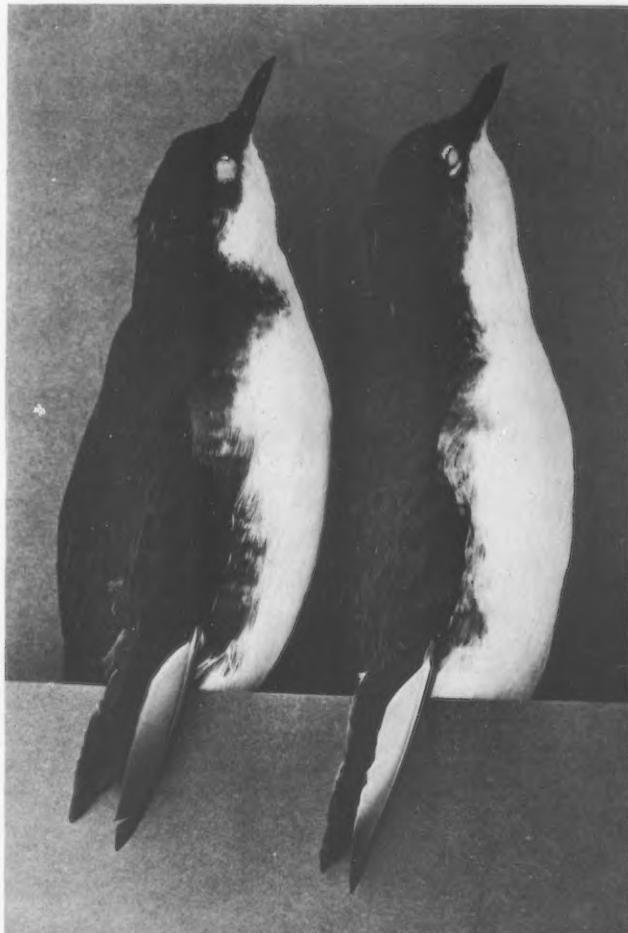


Fig. 30. *Brachyramphus craverii* (left) and *Brachyramphus hypoleucus* (right). Illustrating certain of the specific differences, such as bill shape, coloration of inner web of distal primaries, and lateral demarcation between dark dorsal and light ventral plumages.

tipped plumage of the first fall just appearing. Ordinarily, *craverii* does not exhibit white-tipping on the sides and flanks, but occasional birds in very fresh plumage show faint traces of it.

It may be well to call attention to the statements made by Dawson on page 1489, and by Bancroft on page 1490, of the "Birds of California" (Students' Edition, 1923) relative to intergradation of the two species. Dawson, on the basis of the material in the Museum of Vertebrate Zoology, states that the wing lining of "*E. hypoleucus*" exhibits every degree of gradation from pure white to pure smoky." This assertion is not supported by the facts. There is no overlap in this character either in the specimens in the Museum of Vertebrate Zoology or in any other specimens examined. The second writer states that "intergradation . . . probably occurs . . . in the vicinity of Cedros Island." We are at present aware of no evidence to support such an assertion. There is reason to suppose that murrelets of some species do breed on the islands off the central and southern Pacific coast of Lower California, but the only specimen available from this area is a male *hypoleucus*, taken May 18, 1892, on Guadalupe Island. The date of capture indicates that it was a breeding bird. Whether *hypoleucus* breeds south to the Cape, or whether *craverii* breeds on the Pacific side of the peninsula at all, are questions which only future field work can determine. Meantime, no intergrades among the many winter-taken specimens have so far come to light.

The newly hatched chick of *craverii* does not seem to have been described. The following description is based on five downy young which were hatched from pipped eggs taken on George Island, in the Gulf of California, from April 20 to April 22, 1925.

Plumage in general identical with that of *hypoleucus* of similar age, but entire dorsal surface, except head, with a variable amount of diffused grayish-white mottling or spotting. The darkest specimen is nearly uniform blackish slate, with gray spotting scarcely discernible. The lightest is almost as white as a downy young Ancient Murrelet (*Synthliboramphus antiquus*). White markings on upper and lower eyelids more restricted than in *hypoleucus*, sometimes obsolete. Bill differences parallel the differences in adults. As the young become older, the down assumes a more rusty hue. In a half-grown bird, no. 3715, collection of Dr. Louis B. Bishop, it is dark mouse gray, darker posteriorly, but with gray spotting on back still very prominent. *Craverii* is thus seen to be a highly variable species, in the case of newly hatched young as well as in adults, while *hypoleucus* is stable and exhibits little or no variation.

Following is a list of the specimens examined. Breeding stations are marked with an asterisk.

Brachyramphus hypoleucus: 66

California, Monterey Bay:

- 14. April 25, July 29, August 19, 31, September 20, October 13, 19, 28, November 1, 6, December 26.

Santa Cruz Id.:

- 1. November 28.

Anacapa Island*:

- 1. May 21.

Sta. Catalina Id.:

- 2. February 18.

Huntington Beach,

- 1. May 6.

Orange County:

- 1. January 11.

Pacific Beach, San

- 45. April 8, 11, May 12, 15, 18, 24, 25, 26, 28, 29, June 1, 2, 5, 15, 16, 17, 21, 22, July 1, August 13.

Diego County:

- 1. May 18.

Lower California,

Los Coronados Islands*:

Guadalupe Island (?):

Brachyramphus craverii: 86

California, Monterey Bay:	52. August 14, 16, 30, September 2, 6, 8, 19, 21, 23, 28, 30, October 3, 6.
Lower California, vic. Los Coronados Ids.:	4. August 13.
Gulf of California, vic. Coronados Island*:	2. April 30.
Gulf of California, vic. Ildefonso Islands*:	3. April 25, 27, 28.
Gulf of California, Lat. 29°, 5 mi. W. Tiburon Island:	13. April 19.
Gulf of California, George Island*:	6. April 20, 21, 22.
Gulf Coast, Angeles Bay*:	6. April 16.

Summary: *Brachyramphus hypoleucus* and *Brachyramphus craverii* are specifically distinct by reason of several differences in which no intergradation has thus far been demonstrated. Both species occur at sea as far north as Monterey Bay, *hypoleucus* practically throughout the year and *craverii* during the months of August, September and October. Beck (Proc. Calif. Acad. Sci., 4th Series, III, 1910, p. 60) states that murrelets of this group were common off Monterey Bay from November 24, 1904, to February 4, 1905. Unfortunately, the specimens taken were destroyed in the San Francisco fire. So far as is known at present, *craverii* is confined to the Gulf of California during the breeding season, and *hypoleucus* to the Pacific Coast.

Pasadena, California, June 30, 1925.

A REPORT ON THE BIRDS OF NORTHWESTERN ALASKA AND REGIONS ADJACENT TO BERING STRAIT. PART VIII

By ALFRED M. BAILEY

HUDSONIAN CURLEW. *Numenius hudsonicus.*

Two curlews were seen flying over the tundra at Nome on June 19 and one on June 20. The following year Hendee collected two of this species at Golovin Bay on August 31.

BRISTLE-THIGHED CURLEW. *Numenius tahitiensis.*

The only curlew I collected on our trip proved to be of this species. It was taken on a spur of Cape Mountain on May 28, the benches there being the only places free of snow at that date. A fair wind had been blowing from Siberia and many other stragglers probably crossed the Strait. I collected *Calidris tenuirostris* within a few minutes after securing the curlew. Three other Bristle-thighed Curlew were seen along Lopp Lagoon on July 6, and several on July 8, at Mint River, which may have been this species.

BLACK-BELLIED PLOVER. *Squatarola squatarola.*

I did not observe this species until arriving at Humphrey Point, to the eastward of Barrow, where several were seen August 16. They were quite abundant around Wainwright the latter part of August, and a good series of adult and young birds was collected. One adult, still in breeding plumage, was observed on August 24 with three young which were well able to fly. The last records of the season were made at Icy Cape September 7 and at Wainwright September 13. The Black-bellied Plovers were never common about Wainwright during 1922. The first specimen was seen on May 30 and another on June 9. A few pairs were to be seen on the tundra during June, but they were very wary. Undoubtedly a number would have bred near Wainwright but for the persecution by the native boys. The one nest found was located in black moss, no effort being made to conceal the one egg, which, strangely enough, was accompanied by one of the Arctic Tern. I did not observe the species at Cape Prince of Wales.

GOLDEN PLOVER. *Pluvialis dominica dominica.*

PACIFIC GOLDEN PLOVER. *Pluvialis dominica fulva.*

Golden Plover were quite numerous in the vicinity of Nome between June 19 and 24, and I am certain they were nesting there. We collected a small series, one of which was a female with well-developed ovaries. We found them most numerous back from the tundra in the foothills, sometimes at a height of a thousand feet; and from the actions of several, I am sure they had nests in the near vicinity. We saw a few at Cape Blossom August 1 and at Point Hope on the 2nd. Young birds were quite numerous at Wainwright, Hendee taking one unable to fly on August 8. No adults were noted, which shows how soon the parents start their southward migration. The young proved to be quite common all through August and the first week in September. After September 10, however, they became scarce, as the tundra was covered with snow, and after September 20 none was seen.

Hendee first recorded them the following season on June 3 and again on June 5. None was then seen until June 17, at which date the birds were evidently paired. From that time until July 21 no Golden Plovers were seen. In the early part of August, a few birds were noted along the beaches, doubtless non-breeding birds, and by the middle of the month they were exceedingly common. All collected proved to

be young of the year. Hendee says: "From my observations, I believe the chief migration of the Golden Plover does not follow the coast, the few seen during June being stragglers which later went inland to breed. The greater number seen in the fall are young birds which come to the coast after leaving the adults. The natives state that these birds breed inland in very large numbers."

The first plover of the season taken at Wales was on May 19. The whole tundra was snow-covered, the only bare spot being immediately in front of my workshop where my Eskimo helpers had thrown water, and this proved to be a fine collecting spot. The specimen taken was a female with large ovaries, and she was very thin, doubtless due to her long journey. On May 28, the date when most of the migrants began to arrive, I saw a couple of flocks on a spur of Wales Mountain where they were working among the exposed mosses. After that date a few were to be seen daily about Wales, and they nested in limited numbers there, as I found scattered pairs over the tundra and on the hill slopes all summer. They were exceedingly wary and I secured but one set of eggs. This pair was nesting in the moss among some jagged boulders on the side of Cape Mountain. There was no lining to the nesting depression and no effort at concealment.

On working over our large series we obtained interesting results. Birds taken at Point Barrow all proved to be *dominica*, while only a few of this form were taken at Wainwright, the great majority there being *fulva*. Many individuals, however, appeared to be intergrades. Of the series submitted to Mr. Outram Bangs for examination, he says: "Three of your birds from Point Barrow are *Pluvialis dominicus dominicus* (Müller). Wainwright must, we think, be close to the meeting ground of the two races, as nos. 8872, 8887, 8890, 8904, 8910, 8897, 8920, 8875, 8882, 8889, 8894, 8884 and 8898 are more or less intermediate between *P. d. dominicus* and *P. d. fulva* (Gmelin). The others we call *Pluvialis dominicus fulva* (Gmelin). Only a few of them, however, are extreme *fulva* as represented by birds from East Siberia." In this connection, it is interesting to note that the Point Barrow expedition (Report of the Expedition to Point Barrow, Alaska, Lt. P. H. Ray) secured only *dominicus*, as did Dr. Grinnell at Kotzebue (Pacific Coast Avifauna, no. 1, 1899, p. 28).

SEMIPALMATED PLOVER. *Charadrius semipalmatus*.

Two birds of this species were observed at Whalen, near East Cape, Siberia, on July 11; one of these Hendee secured. The following season, on June 2, he collected another specimen at Wainwright.

MONGOLIAN PLOVER. *Charadrius mongolus*.

I collected a male of this species at Cape Prince of Wales on June 11. The tundra was still snow-covered, only a small, sandy strip being bare along Lopp Lagoon, and there I found this little wanderer from the Siberian shore in company with Yellow Wagtails. A south wind had been blowing for a few days previous, which changed to the north the evening before. On these changes of winds I observed that Old World birds were likely to drift across the channel. Two other specimens of this species were collected in 1849 on Choris Peninsula by an English sea captain.

TURNSTONE. *Arenaria interpres interpres*.

A few turnstones were noted on the gravel beach in the vicinity of Gambel village, on St. Lawrénce Island, and Hendee found one downy young, which had left the nest June 29. A number of birds were seen at Point Hope August 2, several were seen at Barrow August 6, and off Cape Halkett, a small band in flight, on August 10. Hendee collected one from a flock of Red-backed Sandpipers, August 19 at Wainwright. The following spring he secured one bird on June 3, and I saw a few at Wales on June 5, collecting a pair on the 11th. Our birds should be considered as

A. i. oahuensis (Bloxham) if this form be finally recognized. In the meantime, however, as the authorities seem to disagree, it seems best to call our specimens *Arenaria i. interpres*.

BLACK TURNSTONE. *Arenaria melanocephala*.

This species was observed only at Saint Michael, where we saw a small flock on the rounded boulders of a point jutting into the bay. They are confiding fellows and allow one to study them at close range. We received a breeding female from Nagozruk, taken at Wales July 1, 1924.

Denver, Colorado, June 23, 1925.

NOTES ON WATER BIRDS NESTING AT PYRAMID LAKE, NEVADA

By E. RAYMOND HALL

THE OBSERVATIONS here presented* were made between May 15 and August 3, 1924, during which time the writer was employed by the United States Bureau of Biological Survey in making a study of the food habits of the White Pelican. In his report on the main investigation (see Condor, xxvii, July, 1925, pp. 147-160) some description of the general features of the region was given and need not be repeated here. Due to the sparsity of vegetation about the lake, few nesting sites and little or no food of the kinds required by many waterfowl are available; thus, as would be expected, the water birds nesting here are principally fish-eating species. All the species here listed were observed daily throughout the period spent at Pyramid Lake.

Larus californicus. California Gull. Among the water birds this species was second in abundance only to the White Pelican. The estimate made of 600 adult and immature birds at the lake is believed to be a conservative one. California Gulls were to be seen at all hours of the day, sitting on rocks along shore, hovering about the pelican colonies on Anaho Island, or, in company with the pelicans, fishing for minnows far out in the lake. With the setting of the sun, or shortly thereafter, the gulls began making their way north up the shores to the nesting colony. The gulls that were fishing some distance out in the lake usually veered in toward shore when starting for the nesting colony instead of taking the shorter course directly over the water. This suggested that the birds took advantage of the fact that dead fish, as well as the spawning minnows, at certain times, were more often found along the shore than elsewhere.

The nesting colony is located on one of the outlying pinnacles at the north end of the lake. The pinnacle, locally known as "Gull Rock", is separated by over a mile of water from any of the other pinnacles or the nearest shore. All the nests found, with the exception of one, were on Gull Rock. This nest was among the white, water-worn boulders on the south shore of Anaho Island. In this nest a single egg was laid and subsequently deserted. It is interesting to note that fifty-eight years ago Robert Ridgway visited Anaho Island and found the California Gulls nesting there. In reference to his visit to Anaho Island in May, 1868, Ridgway (U. S. Geol. Expl. 40th parallel, iv, pt. 3, p. 631) states: ". . . The more elevated and rocky northern shore was covered by the nests of an immense colony of Gulls (*Larus californicus*) . . .". Whether the California Gulls also nested in 1868 on Gull Rock in the north end of the lake, I do not know. Ridgway makes no mention of having visited the north end of the lake. In 1917 and in 1921, Evermann (Overland Monthly, May, 1923, pp. 16-18, 45) found the gulls nesting on Gull Rock but does not record any nests on Anaho Island. Just why the gulls ceased to nest on Anaho Island is not clear. For some time Gull Rock has been less frequently visited by man than has Anaho Island. This may have had something to do with the abandonment of Anaho Island as a nesting site. Although Ridgway (*loc. cit.*, p. 629) speaks of finding thousands of pelicans on Anaho Island, there may have been fewer pelicans nesting there in 1868 than now. However, there is certainly still ample room for the gulls to nest; thus the possible increase in number of pelicans would not seem to account for the absence of nesting gulls on Anaho Island at present.

* Printed here by permission of Dr. Edward W. Nelson, Chief, Bureau of Biological Survey, United States Department of Agriculture.

Gull Rock is 90 feet long, 60 feet wide, and rises 60 or 70 feet above the water. The nests are placed on the terraces left by former water levels, in the numerous crevices, depressions, and on level spots on other parts of the rock. They are not bulky affairs, as is sometimes the case with nests of this species, but consist of only a few weed stems, bits of brush, and occasionally a few feathers. I learned that an Indian had visited the colony on May 10 and had taken all the eggs for food. My finding of 300 young gulls on June 28 when I first visited the rock indicated that the birds had laid again. The young sought safety by tumbling into the water or by crawling into the numerous holes and crevices, and several young no doubt escaped notice by the latter means, since the color of the natal plumage harmonizes well with that of the dirty white rock.

On July 21 several young were seen flying about the boat landing at Sutcliffe Station, seventeen miles from Gull Rock. A second visit was made to Gull Rock on June 26 at which time half of the young were able to fly. Some not quite able to fly were pursued in the water and note was made of their inferior swimming powers as compared with those of young Mergansers. While seeking to escape by swimming, the young have a characteristic habit of drawing the head back and down so that anterior and posterior ends of the body can hardly be distinguished except by observing the direction in which the bird is moving.

All food items identified consisted either of Lake Minnows (*Leucidius pectinifer*) or Lake Chub (*Siphateles obesus*). Both fishes are of no direct economic value to man. The California Gull is a scavenger in its summer home at Pyramid Lake as well as in its winter home on the Pacific coast. Several dozen gulls are always to be found near every Indian fish camp, upon which they keep an alert eye, and at the first indications of fish being cleaned they come trooping to the feast. The gulls also abound about the pelican colonies on Anaho Island, rushing in at every opportunity to seize fish that are disgorged by young or old pelicans. While I never actually saw gulls eating pelicans' eggs, I feel certain that they do when opportunity presents itself. A ten-inch Lake Chub was taken from the gullet of an adult California Gull that was shot one evening while on its way back to the nesting colony. On June 28 one Lake Chub eight inches long and three Lake Minnows each seven inches in length were found lying among the nests on Gull Rock. Another Lake Minnow seven inches long was disgorged by a young gull that was pursued in the water.

Phalacrocorax auritus albociliatus. Farallon Cormorant. Of the water birds this species was exceeded in abundance by only the White Pelican and California Gull. It was impossible to count the birds or satisfactorily to estimate the number; for when the nesting colonies were approached the birds scattered out into the numerous channels and coves among the pinnacles. There were certainly several hundred and perhaps a thousand adult birds at the lake.

Evidently the cormorants secure all the fish necessary in a short time, for of the thousands of times birds were observed, few were seen in the water unless frightened there from their perches. Only once did I see a bird actually catching fish. The fact that the birds remain for the most part in the immediate vicinity of their nesting grounds might also indicate that they are expert fishermen. They do not wander to the far reaches of the lake and to other lakes and streams, as, for example, do the pelicans. Taverner (Can. Geol. Surv. Bull. no. 13, biol. ser., no. 5, p. 7) suggests that the cormorant may be ". . . deficient in oily matter with which to anoint its feathers, for it does not seem to be as perfectly adapted to aquatic conditions as most other water birds. Like its near relative, the Anhinga, which has a similar habit, it seems to find it necessary to dry its plumage after prolonged submersion. At such times it is a most awkward and ungainly sight, sitting with relaxed wings and body,

limp and flaccid as a garment hung on a bush to dry." If this supposition be true, and my observations at Pyramid Lake bear out Taverner's suggestion, the cormorants are perhaps not so often seen on the water as are the pelicans, not alone because of the superior fishing powers of the former, but also because the cormorants are not so thoroughly adapted to aquatic life as are the pelicans.

At Pyramid Lake the cormorant is a bird of the rocks, not only nesting there, but perching singly or in flocks of as many as a hundred by themselves on rocks six to twenty-five feet above the water. They also often perch in company with pelicans on rocks rising only a few inches to five feet above the water. When away from their nesting grounds they are wary, taking flight when an observer approaches to within 150 to 200 yards. When a mixed flock of cormorants and pelicans is approached the cormorants slide off into the water before the pelicans fly. When cormorants are frightened from rocks several feet above the water they fly rather than swim. Cormorants are clumsy birds. In observed instances when taking flight from the water the cormorants struck the water with the feet no less than twenty and as many as thirty times before getting into the air. When leaving perches they often descend several feet before acquiring sufficient momentum to rise and fly in horizontal lines. This clumsiness is more evident when a mixed flock of cormorants and pelicans takes flight. A pelican, though much larger, strikes the water with the feet only five or six times before getting into the air.

The cormorants nested on the ledges of the chain of steep pinnacles that extended out from, and was connected with, the north shore of the lake, and on adjoining pinnacles and rocks that were surrounded by water. In height above the water the nests varied from eight to twenty feet. Eight nests were also found on Gull Rock. The nests were flat platforms of sticks and weed stems. The usual number of eggs was four, although sets of three and five were sometimes found. Ridgway (*loc. cit.*, pp. 635-636), who visited Pyramid Lake both in 1867 and in 1868, furnishes the following information concerning the nesting of these birds at that time: "The Cormorant was very abundant at Pyramid Lake and along the lower portion of the Truckee River. . . . Small congregations were frequently to be seen during the summer-time, perched upon the snags far out in the lake, the latter being submerged cotton-wood trees which marked, at that time, the former course of the river when the lake occupied more restricted limits. . . . On these treetops many of their nests were found, these being composed of sticks, and containing one to three eggs each."

The lowering of the level of the lake within recent years has moved the lake shore over two miles from the nearest cottonwoods along the river. This no doubt accounts for the fact that the cormorants now nest only on the rocks. The colonies were visited by me June 28 and July 26. On the first visit two sets of fresh eggs were taken from a colony of twenty-two nests on one of the small rocks. On July 26 all the remaining twenty nests contained young, of uniform size, judged to be six or seven days old. This indicated an incubation period of 21 to 23 days. No nests containing live young were found on June 28, though several dead young one-third grown were found at one of the colonies. On July 26, however, nearly all the nests contained young. Some were just emerging from the eggs and others were fully one-third grown. In all stages of development the young are jet black in color. Whether or not this black coat tends to absorb enough more of the light rays to cause the young to succumb more readily to exposure to the heat of the sun than do other young birds I do not know, but they seem more susceptible to the sun's rays than most young birds. Ten minutes' investigation of one small colony, at noon, resulted in the death of a large number of young which normally the old birds shielded at this

time of day. The young just emerging from the shells and those more than one-fourth grown seemed to be affected little or none by the heat, but those between these ages succumbed readily.

There is a very high mortality among the young even when unmolested by man. This is perhaps due to the inequality in size of the young in a single nest. The one that hatches first apparently grows relatively faster than the others and in all ways has much the best chance of surviving. This is obviously at the expense of its sisters and brothers who are soon crowded out of the nest or are denied the amount of food necessary for existence because of the demands of the largest one. Rarely two, and generally only one, young more than half grown, are found in a nest. The nesting colonies of the cormorants are even more filthy than those of the White Pelican, if that be possible. Bent (U. S. Nat. Mus., Bull. 121, pp. 246-247) has faithfully described the atmosphere of a typical colony when he says: "Such a colony is the filthiest place imaginable, for no other birds can equal cormorants in this respect. The nests and their surroundings become thoroughly whitewashed with excrement, which also accumulates in slimy pools swarming with flies; the nests are often alive with fleas, lice, and other vermin; and the odor of decaying fish scattered about adds to the nauseating stench."

The young disgorge food readily. On July 26, from this disgorged food I identified thirty-six Lake Minnows and ten Lake Chubs. The adults, too, often disgorge their food upon the approach of an intruder, evidently sometimes having a load too heavy to carry. One I am sure had a too heavy load, for after three vain attempts to "take the air" it went through some violent contortions and disgorged several fish; then flew off after the fashion of a normal cormorant. By coming around a point of Anaho Island in a boat I surprised a cormorant sitting on a rock at a distance of twenty-five or thirty yards, which disgorged five Lake Minnows, each five and one-half inches long, before taking wing. I hastened to the spot just in time to see one of the disgorged fish slowly swim away. Two of the other fish had sufficient life left to flop vigorously after being placed in the boat.

Mergus americanus. American Merganser. This species was fourth in abundance among the fish-eating birds. Until June 2 mixed flocks of males and females, sometimes numbering twenty, were seen, but after this date the flocks seldom numbered more than twelve and were composed largely of males. The Mergansers were most abundant near suitable nesting sites, these being rocky cliffs and crumbling boulders along the shore. The Pyramid, certain steep rocky parts of Anaho Island, and the pinnacles at the north end of the lake were favorite haunts.

On June 2 one nest containing six fresh eggs was found in a hole on the east side of the Pyramid at a height of one hundred feet above the water. Although the eggs were fresh, the female remained on the nest despite my investigation, as I passed up the face of the Pyramid. She displayed a very bold front, hissing and striking viciously with her bill. The eggs lay on the small bits of rock that had shelled off the walls of the cavity. The eggs were surrounded by, but not lying on, a ring of down feathers. No other material was in the nest. When I again examined the nest, during my descent from the top of the Pyramid, the female had gone, but she had not covered the eggs with down. On June 28 another nest containing three fresh eggs was found, in the same type of cavity as the one mentioned above, on one of the pinnacles at the north end of the lake. This nest, however, was only ten feet above the water. Between these two dates, June 2 and June 28, several other females were flushed from holes in cliffs on the east shore of the lake, on Anaho Island and on the Pyramid. Young were first noted on July 18 at Anaho Island when six young accompanied by an old female were seen.

About sundown the females would fly from the nesting holes down to the water where the males usually joined them, and they then foraged in pairs until dark. On June 4, at Anaho Island, three of the females were observed feeding from the time they left the nests until darkness came on. One dived four times but the others, except for a few thrusts of the head below the water, swam about feeding on the surface, sometimes with both mandibles under water and at other times with only the lower mandible below the surface. This method of "skimming", by holding one mandible above and the other below the surface of the water, was first noticed in a male that I observed from behind some large boulders with the aid of field glasses on May 27. Swarth (Univ. Calif. Publ. Zool., vol. 7, pp. 39-40) has previously reported the Merganser as feeding in the manner described above.

On July 26, near Pyramid Post Office, a flock of fourteen young about two-thirds grown and one old female were pursued by me in a motor boat. They maintained their lead of one hundred yards or more for three-fourths of a mile. The old female always set the pace. During the entire chase she did not fly. Dashes in which both the feet and the wings were used, served to carry the birds over the water at a rapid rate. After a time some of the young began to tire and I was able to approach within gunshot of these. During this chase the flock left a train of disgorged food in its wake, that the attending gulls and four pelicans picked up.

The only definite information concerning the food of this species was that obtained June 21 when a female, upon my approach, before taking wing, disgorged three Lake Minnows. Two of these fish were five and one-half inches in length and the third four and one-half inches long.

Ardea herodias hyperonca. California Great Blue Heron. This subspecific determination is based on a single specimen about two-thirds grown in juvenal plumage which, according to information furnished by the United States Bureau of Biological Survey, resembles *A. h. hyperonca* more than *A. h. treganzai*.

The only rookery discovered was one of ten nests on the northeast projection of Anaho Island. The flat nests, about four feet in diameter, were made of sticks one-half inch or less in diameter and were placed on the tops of low-growing grease-wood bushes along the east face of a ten foot cliff. On May 29, when the rookery was first visited, three nests contained three young each, five nests contained four young each, and one nest contained five young. The tenth nest contained four eggs. At this time none of the young was more than two-thirds grown. In some cases the young showed a savage front by snapping their bills and uttering hoarse cries. In other cases they scrambled from the nests into the large piles of boulders, or crevices in the cliff. The old birds returned to the nests when I had gone less than fifty yards away, but they eyed me intently and took no notice of the young so long as I remained in the immediate vicinity of the nests.

Old nests of this species were found on the sides and top of the Pyramid. Ridgway (*loc. cit.*, p. 616) records finding nests of the Great Blue Heron both on Anaho Island and on the Pyramid in 1867 or 1868. At that time, however, the nests on Anaho Island were on the south side, whereas in 1924 they were only on the northeast arm of the island. Evermann (*loc. cit.*, p. 16) states that: "On the very apex of this pyramid a pair of Great Blue Herons nest regularly every year."

The old birds fished in the early morning or late evening, and long after sundown could be seen standing motionless on jutting points of rock waiting, heron-fashion, for some luckless fish to come within striking distance.

University of California, Berkeley, April 23, 1925.

FROM FIELD AND STUDY

Nesting of the California Pigmy Owl in Yosemite.—On May 19, 1925, the nest of a California Pigmy Owl (*Glauucidium gnoma californicum*) was located, in a cavity of a black oak standing within seventy feet of the highway and close to the LeConte Lodge. The entrance was about four inches in diameter, a circular hole some thirty feet from the ground, where the base of a small lateral branch had decayed away in a large upright dead limb. The nest within was somewhere well below the entrance.

There was little difficulty in distinguishing the two birds of the pair, as the breast plumage of the female was of a darker shade, and her tail shorter, evidently worn so by the confines of the nest. As incubation was only then in progress, it would seem too short a period in which to be thus affected, and the fact might be taken to indicate an earlier nest. Later the tail acquired its normal length.

The only note of the female was a soft twitter used indiscriminately, as when in protest to noisy pugnacious neighbors or when on the wing flying to her mate in response to his summons. His call invariably announced food, and was the well known whistle of a single note given three times, rarely four, and the interval before repeating, of variable duration, extending into minutes. On one occasion only was the long trilling call heard, and possibly it might have come from some other member of the tribe. He seldom went near the hole, and generally refrained from alighting in the tree, but called from a nearby oak grove, the lower fringe of growth that covers the talus slope from the cliffs. She often responded promptly from the hole, flying toward his general direction and, when definitely located, darting at him, seizing the offering in an apparent clash of wings, and either remaining to eat it or, as the case might be, carrying it back to the hole. Sometimes her exit would be delayed, obviously due to her inability to catch the sound, and occasionally she was obdurate and refused to appear.

The first evidence that the young were receiving solid food was on June 10, when the female carried a lizard to the nest. As far as observed, the male never took part in feeding the young. No pellets or refuse of any kind could be found under the tree.

On June 21 a young bird appeared at the opening, and it was soon apparent that there were no others. From that time on to July 1, when the nest was deserted, it sat daily at the entrance. During the following days the bird remained near at hand, and gradually worked up the talus slope. The young bird appeared from the first fully developed, with no immaturity noticeable in the plumage. It was never fed at the entrance, but was first crowded back out of sight by the mother. On one occasion when she was away, and the young one sat there as usual, the male arrived with food and alighted in a neighboring tree. The young bird showed no recognition of the frequent calls; in fact the two acted as though oblivious of each other, and nothing took place during the half-hour they were under observation.

Between the day the nest was discovered, May 19, and July 1, an interval of forty-three days, nineteen identifications were made of the food material brought by the male and received by his mate. The list consists of eight lizards, five birds, and six small mammals, apparently mice. While this may represent fairly the main diet, it should be borne in mind that our occasional inability to recognize the prey was particularly applicable to smaller objects. The lizards were easily distinguished with their long dark tails hanging down behind the owl when at rest, and even more conspicuous when in flight.

Of the birds, the first to be recognized was a warbler, probably a female Calaveras, and later, on June 19, a male Calaveras was carried into the hole. On the 27th a fledgling of some small kind was noted, and on the following day, another of a larger species with noticeably long legs, and too immature to have left its nest.

There was nothing to indicate any nocturnal activity of the owls; in fact during the three months from May 1 to August 1 not a single call at night was heard. An early call soon after daybreak was not uncommon, and the last was never later than at dusk. During the latter half of June, the female spent much of her time in the trees near the nest, often roosting on a certain high dead branch. Here she was exposed to attacks, to which she generally showed indifference, perhaps snapping

occasionally; but once, when patience ceased to be a virtue, she pursued a noisy robin. The male was dedicated to the chase and would leave immediately after delivering his plunder. Naturally his arrivals were extremely irregular. The best record noted was on June 7 when, besides an early call, he brought in between 7 A. M. and 2 P. M. two lizards and two mice.—F. C. HOLMAN, Berkeley, California, November 28, 1925.

"Evidence" in the Case of the House Wren.—On page 242 of the November CONDOR there appears editorial comment on the soundness of Mr. Baldwin's statements on the fallibility of evidence from a legal standpoint, in the case of the House Wren. With all deference to Mr. Baldwin, both as a naturalist and a lawyer, I would like to point out that in his own evidence in defence of the wren he admits that most birds mob it or recognize it as an enemy. Is not this very strong evidence of its destructiveness? Other birds do not attack Catbirds, Robins, Red-headed Woodpeckers or other species which he considers should share the odium attached to the House Wren, nor do they in my experience recognize the English Sparrow as an enemy except when he is actually engaged in destroying their homes.

This almost universal recognition of House Wrens, Jays, and Grackles by most small birds as objects to be attacked and vituperated is surely the best of all evidence of their destructiveness, based on centuries of experience by the sufferers. Also the fact that Mr. Baldwin has numbers of birds nesting in the vicinity of his wren boxes is not actual evidence that he would not have many more if the wrens were not encouraged. In this connection the experience of Dr. A. A. Allen with his nesting Screech Owls should be considered. The resident nesting population was not appreciably lessened in spite of the tremendous slaughter perpetrated in the immediate vicinity by the owls.

I am not a lawyer but as a humble juror I could say of Mr. Baldwin's plea, "no evidence for the defence."—ALLAN BROOKS, Nanaimo, British Columbia, November 21, 1925.

Nesting of the Great-tailed Grackle in New Mexico.—There are but few authentic records of the occurrence of the Great-tailed Grackle (*Megaquiscalus major macrourus*) in New Mexico. Mr. R. T. Kellogg has collected the bird near Silver City (Condor, vol. 24, 1922, p. 30), and it has been reported from the Rio Grande Valley, near Las Cruces.

In all of my travels, extending over a period of more than ten years, I have not seen the bird in the Rio Grande Valley, either of New Mexico or Texas; but I have known of a single occurrence at Fort Stockton, Texas, about 250 miles southeast of El Paso. On July 21, 1924, I collected a female, in the molting plumage, in the Pecos Valley of New Mexico, about 35 miles south of Carlsbad; this was the first time I had seen the bird in the state.

On July 24, 1925, to my surprise, I found a breeding colony of these birds in a marshy, cat-tail filled draw, eight miles south of Carlsbad. At the point where these birds were located the Carlsbad-Malaga Highway parallels the railway line, only a wire fence separating the two right-of-ways. While passing along the road I noticed a male grackle, with the conspicuous drooping tail, flying low from a nearby cotton field to the cat-tail filled drain I had just crossed about 200 yards back. I stopped my car and walked back to the draw. On the roadway is only a low concrete bridge, while just above is a twelve-foot trestle where the railway line spans the drain. The thick cat-tails extended above and below as far as I could see, from a few feet wide at places to more than 150 feet at the widest points.

By the time I had reached the trestle a half dozen of the adult grackles, which were protesting my intrusion, were in sight, perched on the low telegraph posts and wires (which offered excellent look-outs) and on the cat-tails nearby. Great numbers of Red-winged Blackbirds were also sitting about. The unusual luxuriance of the cat-tails offered excellent protection for the birds; a little water was visible here and there in the bogs where the cattle had eaten down the grass. As I moved about quietly, I discovered several young grackles in the cat-tails, almost as large as the parent birds and flying easily. The adult birds that arrived after I returned to the nesting site, held food in their beaks. It was difficult to determine just how many birds were

present; but I saw as many as a dozen, including the young. As I had collected a bird just south of this point, and since this is a fitting nesting place, it is probable that the birds have nested there in previous years. The strange part is that they have not been observed in migration, farther south, in western Texas. An observer who was not looking for grackles could easily have passed by in an automobile without detecting them, with the redwings and other birds, just as I came near doing although I was on the lookout for them at the time.—J. STOKLEY LIGON, Ft. Stockton, Texas, October 7, 1925.

Scarcity of Certain Australian Birds.—The fact that some Australian birds are becoming increasingly scarce has given concern to our ornithologists, and special efforts are being made to find out the reasons. The main factors are no doubt settlement of the country and the introduction of the rabbit, fox and cat; for it can be noted that only ground birds are affected. One species that only diligent search can find is the Black-throated Coach-whip Bird (*Psophodes nigricularis*). This species has a comparatively small range in southwestern Australia, inhabiting dense brush where it is probably safe from introduced enemies; but the settlers destroy its habitat by fire in order to clear the land for more useful herbage. *Atrichornis clamosa*, inhabiting the same districts and something of the same class of country, but with a more restricted habitat, is seemingly even more scarce, and may be extinct. This bird draws attention to its whereabouts by its song, and has likely been an easy prey to *Felis domesticus*.

Some of our ground parrots, which forty years ago were very numerous, are now reported only occasionally, and this scarcity extends, not only over settled districts, but also to uninhabited country. The Scarlet-shouldered Parrot (*Psephotus pulcherimus*) is now apparently confined to one small district. It would seem that its habit of nesting in ant hills, in a position exposed to enemies, has been the cause of its undoing, for practically all its habitat is settled. Other birds of the same genus, and much the same habits, but nesting in trees, are as numerous as ever they were in settled districts. Grass parrots of the genus *Neophema*, quiet and retiring little birds, were the first to go before advancing occupation of the land by sheep and cattle. The habitat of some species, however, extends into the uninhabited wilds, but even here it would seem that the alteration of the herbage by the introduced rabbit has had its effect. The Ground Parrots (*Pezoporus* and *Geopsittacus*), entirely terrestrial in their habits, are now, as far as we can ascertain, only found in a few restricted localities, though they may be holding their own in parts of the interior.

The great majority of our birds, however, are not affected by any delimiting factor, and are still extremely numerous. Even in our cities many indigenous species accept the changed conditions without any difficulty or protest. In this we are very fortunate, for it is a great pleasure to have the wild birds give us their confidence, thus adding to the interest of our parks and gardens.—A. S. LE SOUEF, Taronga Zoological Park, Sydney, Australia, December 2, 1925.

Lesser Yellow-legs in Western Oregon.—On September 10, 1925, I took at Tillamook, Tillamook County, Oregon, one of three Lesser Yellow-legs (*Totanus flavipes*). Mr. S. G. Jewett has kindly given me the following previously published records for the state: Abundant at Malheur Lake during migration (Bendire, Proc. Boston Soc. Nat. Hist., vol. 19, 1877, p. 141); specimen taken July 10, 1899, near Corvallis (Woodcock, Birds of Oregon, 1902, p. 20); seen at Malheur Lake, August 18 and 24 (Willett, Condor, xxi, 1919, p. 202).

Three Greater Yellow-legs (*Totanus melanoleucus*) which were present in the same slough were pursuing small fish by running rapidly through the shallow water, keeping the bill and so much of the head under water that a thin silvery wave was constantly breaking over their heads.—RALPH HOFFMANN, Carpinteria, California, November 14, 1925.

A Prolific Anthony Green Heron.—On June 5, 1913, Mrs. May Canfield and Walter Mackinon, while searching for birds' nests along the Sweetwater River at Bonita, San Diego County, came upon the nest of an Anthony Green Heron (*Butorides virescens anthonyi*) about fifteen feet above the ground in a willow tree. Investigation revealed

five half-grown young. The place was not visited again that year, but early the following season the old heron's nest was found to be still in a fair state of preservation. Several visits were paid to the nest during the rest of that season, but it was never occupied, nor was an Anthony Green Heron seen in the vicinity.

On April 27, 1915, Mackinon found a heron sitting on the nest. Climbing a nearby tree for a point of vantage, he flushed the bird and found that the nest was empty. In the meantime I returned from an expedition elsewhere and, hearing of the return of the heron, drove out to Bonita on May 11, 1915, with Mrs. Canfield and Mackinon. When we were directly beneath the nest, the old bird flushed and, through the thin platform of sticks, there could be seen the blue of many eggs. No time was lost in climbing the tree and, to our astonishment, we found that the nest contained eight eggs. These we collected, together with the nest.

Apparently this did not discourage the herons, for, about ten days later, Mrs. Canfield and Mackinon flushed presumably the same bird from a new nest, situated at

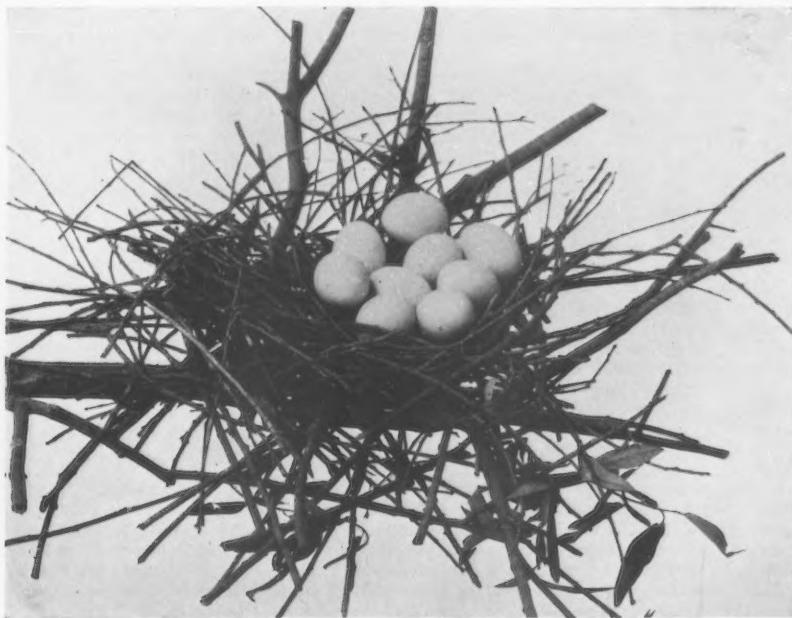


Fig. 31. SET OF NINE EGGS OF ANTHONY GREEN HERON.

about the same elevation as the old one and only about a hundred and fifty yards away. The structure of the nest permitted observation of the contents without climbing, and it was evidently empty.

Later on our party was joined by Donald R. Dickey of Pasadena, who was then making photographic studies of birds and their nests in the interest of W. L. Dawson's "Birds of California". On May 30, 1915, we all went out to Bonita to look over various nests we had previously located and to see how the herons were getting along. As we approached the nest, the old bird flopped off with a squawk. The nest seemed overloaded! A careful survey of the slender trees surrounding the site gave us little hope of getting safely to the nest, so we went to a nearby packing house and borrowed a "picking ladder", a self-supporting, tripod-like arrangement. With this we were able to reach the nest.

We had agreed that should the nest contain eight eggs or less it was to go to Mr. Dickey, as the species was new to his collection. He mounted the ladder but, a moment after gently reaching over the edge of the nest, he descended empty-handed, exclaiming that there were "almost a full dozen if not more". I climbed up and counted nine fresh, blue eggs into my hat—a find to brighten the eye of any oologist, even though his hair be gray or his shoulders bent. So the set of eight with nest taken on May 11 was presented to Mr. Dickey, while I retained the set of nine and nest taken on May 30.

The measurements in millimeters of the two sets are as follows:

May 11 set: 40 x 29, 40 x 29, 39 x 29.2, 37.3 x 30, 39 x 28.2, 37 x 29.6, 37.4 x 29, 37 x 29.3.

May 30 set: 42 x 29.8, 41 x 29.2, 40.5 x 29.8, 40 x 30, 40 x 30, 40 x 30, 38 x 30, 37 x 29.7, 37 x 29.7.

The variation in size of the eggs might seem to be evidence enough for accusing the male of polygamy. Yet no one observed more than one female at either of the nests, and it would hardly seem possible that he could move multiple spouses from one nest to another and induce them to repeat operations. It has been my experience, and that of others, to find Anthony Green Herons in scattered pairs through the willow bottoms and never common. I know of no record of their laying in each other's nests.

During the winter of 1915-16, torrential floods tore out all the trees in this locality, even washing away a large concrete bridge, and caused the herons to seek other nesting sites. So my acquaintance with this pair ended, and although the facts here stated occurred some ten years ago, I have felt they might be worthy of permanent record.—LAURENCE M. HUEY, *Natural History Museum, San Diego, California, February 11, 1925.*

The Western Meadowlark in Northern British Columbia.—An occasional meadowlark pushes northward in spring far beyond the regular range. Such a one was taken by the writer in a field at Fort Simpson on the Mackenzie, in latitude 62°, in the spring of 1904 (North American Fauna, no. 27, 1908, p. 410). It was with a feeling of surprise, however, that I learned of the presence in summer of the Western Meadowlark (*Sturnella neglecta*) in the Hudsonian Zone valleys of certain of the upper tributaries of the Stikine, in northern British Columbia.

In the late summer of 1910, in company with George Mixter, of Boston, Massachusetts, and Dan Brown, of Telegraph Creek, British Columbia, the writer crossed British Columbia from the Stikine to the Peace. Though most of the country we passed through was unknown to our entire party, we traveled a few miles up one of the southerly head tributaries of the Stikine, the Ispatseeza, with the valley of which, a few miles farther north of our position, Mr. Brown was familiar. He had spent several seasons among the mountains of central British Columbia, was a keen observer, and as his youth had been spent in the western states was familiar with most of our common western species of birds and mammals. My interest in the bird life led him to tell me, among other notes of interest, of observing a number of meadowlarks in this valley during a previous summer. Several different birds were seen, singing as if on their nesting grounds, and under such circumstances that it seemed reasonable to believe that they were breeding, although no nests or young were actually seen. Mr. Brown's experience and undoubtedly familiarity with the species, and his general trustworthiness as an observer, lead me to place implicit faith in his narrative and to put the observation on record.

Although one has difficulty in picturing the meadowlark as a summer inhabitant of Hudsonian Zone valleys tenanted by breeding willow ptarmigans and golden-crowned sparrows, yet from the standpoint of one on the ground, the surroundings seem not necessarily uncongenial. During June and July, owing to the long hours of sunlight, the days are warm, often hot, and the nights are too short to become very cool. Herbaceous vegetation, with its accompanying insect life, is abundant, and there would seem to be no insuperable obstacle to the breeding of a comparatively hardy bird like the meadowlark, any more than in the case of the Western Chipping Sparrow, whose nests were found within a few miles.—EDWARD A. PREBLE, *Biological Survey, Washington, D. C., January 18, 1926.*

Doped Robins.—Professor Andrew C. Lawson, of the Department of Geology of the University of California, recently aroused my interest by telling me of some "doped" or "inebriated" robins he had learned about when visiting a relative in Montana. Professor Lawson had brought with him samples of the fruits of a bush which the birds were feeding from. These samples he turned over to me, and Professor N. L. Gardner of the Department of Botany of the University identified them as the berries of the *Lonicera tatarica*, or "Tartarian Honeysuckle", an Asiatic plant widely cultivated in the eastern United States.

At my request Professor Lawson elicited further facts, as follows, which I quote from a letter dated October 12, 1925, from Mr. W. L. Lawson of Billings, Montana.

"We have a 75 foot hedge of common pale pink blossomed honeysuckle, which grows luxuriantly here, and each summer there is a heavy crop of a red, very juicy fruit on the bushes. This fruit has the general appearance of a large red currant, but it is extremely bitter in taste. It makes a beautiful red jelly, but no amount of dilution with other fruit juices eliminates the bitterness sufficiently to make the jelly palatable for human food. This was determined here by Mrs. Lawson by actual experiment on several pints of the honeysuckle fruit.

"When picking the fruit for this experiment my attention was attracted to the robins, dozens of which were in the bushes and on the ground beneath. They were so tame and stupid that I could not help noticing them. . . . If one got within say two feet of two or three of them on the ground they would move just far enough to maintain about that distance. On repeated occasions I saw four and five of the robins lying on the ground in the dirt with wings awry—very much as chickens lie in the dry soil to dust themselves. This was such a curious sight that I called Mrs. Lawson to witness it and she will confirm all I have said. This has been such a common thing with us the past five years that we no longer pay any attention to the robins; but we regret that the stupid condition of the birds makes them unusually easy prey for our cat, who seems to know that she can get one every time she wants it.

"The hedge is between my lot and my neighbors, who also are familiar with the 'doped' robins. This summer their new chauffeur, not knowing that I had observed the condition of the robins, told me of finding robins 'drunk' and that one afternoon he had picked up three from the bushes and held them in his hand.

"There is no doubt that there is some alkaloid in this fruit that markedly affects the ordinary keenness of the robin and makes it a stupid bird with little ability to protect itself or keep out of danger."

Here is another case of an entirely new condition, an alien plant figures in this instance, confronting a native animal to the latter's hazard. Those persons desiring to plant on their premises berry-bearing shrubbery with a view to providing food for birds with the tastes that robins exhibit would do well to enquire pretty carefully as to the real nature of the kinds of plants under consideration.—J. GRINNELL, Museum of Vertebrate Zoology, Berkeley, California, December 24, 1925.

A Note on the Feeding Habits of Gulls.—While fishing at Hermosa Beach on December 21 and 22, 1925, I was much interested in watching a number of immature Glaucous-winged Gulls (*Larus glaucescens*) and a few California Gulls (*Larus californicus*) feeding on goose-neck barnacles. They would alight on the water near the pier, and then paddle from one piling to another, pecking at the masses of barnacles and mussels which were attached to them. Through my binoculars I watched these birds seize the barnacles in their bills, and then swim backward, jerking repeatedly until they would break or pull them off. If the barnacles were small enough the birds would quickly swallow them, and those which were too large they would carry off to the beach where they could pick them to pieces. I commented upon the actions of these gulls to a couple of friends who had fished there for a number of years, and they said that they had never seen them do it before this winter.

I have concluded from this observation that for some reason unknown to me the gulls have experienced this winter less successful foraging than usual.—JOSEPH H. WALES, Pasadena, California, January 16, 1926.

Gulls Feeding on Star-fish.—Mr. Wales' comments, given above, upon the feeding habits of certain gulls, remind me of similar observations recently made by myself while travelling between San Francisco and Berkeley. Along the Key Route mole,

on the east side of the Bay, portions of the piling exposed at low tide are frequently seen to have adhering to them numbers of rather large star-fish, apparently eight or ten inches in extreme diameter. On many occasions Western Gulls (*Larus occidentalis*) and Glaucous-winged Gulls (*L. glaucescens*) were seen swimming about the piles and pecking at the surface of the wood. Whether or not the birds were attacking the adherent barnacles and star-fish could not be seen from the train; but on several occasions a gull was seen sitting solemnly on the top of a pile, with a huge star-fish in his bill, and looking as though he were a little at a loss as to what to do with the prize now that it was secured. It would seem an almost impossible type of diet.—H. S. SWARTH, *Museum of Vertebrate Zoology, Berkeley, California, January 21, 1926.*

A Banded Ferruginous Rough-leg.—On October 25, 1925, an adult of this species (*Archibuteo ferrugineus*), with tail and wings very badly frayed, and wearing a leg-band, was killed at Inglewood, a suburb of Los Angeles, and brought to the Museum. The band is of aluminum with edges turned back to hold a strip of green celluloid bearing a black figure 6 (or 9) at each end; stamped on the inside is "Bourne Mfg. Co., Melrose, Mass.". It is evidently one of the numerous styles used in banding poultry; but by whom was it attached to this hawk, and where? Local zoos appear to have no record of the bird, yet the condition of its wings and tail, and nature of the band, stamp it as an escape from captivity. Should any CONDOR reader have knowledge of this hawk, such information, with details, will be appreciated by the undersigned.—L. E. WYMAN, *Los Angeles Museum, December 31, 1925.*

The Prairie Falcon in the Willamette Valley, Oregon.—On November 24, 1925, at the Oregon State Game Farm at Corvallis, Oregon, one of the farm employees shot an adult female *Falco mexicanus* that was in pursuit of a female Ring-neck Pheasant. At this game farm there is kept a breeding stock of several hundred pheasants which, especially during the winter months, attract a number of raptorial birds; but this is the first Prairie Falcon to be seen there, and only the second record of the species in the Humid Coast Belt of western Oregon, of which I have knowledge. The first was a specimen recorded by O. B. Johnson (Amer. Nat., 1880, p. 638).

Mr. Gene Simpson, superintendent of the Oregon Game Farms, who sent me the bird for identification, wrote of it as follows: "We had a few old pinioned pheasants out in an open field, and this bird gave us a lot of trouble. Be this a falcon, he is sure a pheasant killer."—STANLEY G. JEWETT, *Portland, Oregon, December 7, 1925.*

Unusual Visitors in Humboldt County, California.—On August 6, 1924, a traveling salesman brought me a beautiful white hawk and told me it had been shot by a farmer's boy at Miranda, on the South Fork of the Eel River, in Humboldt County, California. The bird was seen in company with another of its kind along the river for several weeks before it was shot, according to my informant. It was a male White-tailed Kite (*Elanus leucurus*).

On December 10, 1925, one M. Lough sent me a specimen in the flesh of the White-faced Glossy Ibis (*Plegadis guarauna*). It proved an immature male bird. Mr. Lough informed me he shot the bird on the salt marsh at the southern edge of Humboldt Bay, where it had been seen several times the previous week. I believe these are the only records of the White-faced Glossy Ibis and the White-tailed Kite for Humboldt County.—C. I. CLAY, *Eureka, California, January 11, 1926.*

American Redstart Near Los Angeles.—On Monday, November 23, 1925, a female American Redstart (*Setophaga ruticilla*) was seen at Verdugo Woodlands among the willows along the stream. The bird was studied by eight members of the Southwest Museum Bird Study Club (at least four of whom were familiar with the species in the East) for about half an hour. It never left the willows while under observation, but fed on them and in the air in company with Audubon Warblers, Ruby-crowned Kinglets and Bush-tits.

Identification was easy. The yellow markings on wings, tail and sides, on a gray background, were noted by all. The broad interrupted band at the base of the tail

was especially conspicuous, since the tail was kept spread in true Redstart fashion. Almost more diagnostic than markings was the behavior of the madcap sprite. Member of an exceedingly active family, the Redstart outdoes all the others in wild acrobatic feats, and once known is not soon forgotten. Its agility almost deceived the observers into the belief that there was more than one. But in spite of the fact that there seemed to be Redstarts all over the tree, the frayed condition of the tail soon proved all to be one and the same bird.

Willett and Grinnell record but three occurrences of this species in southern California. To my knowledge, at least one other has since been published in the *CONDOR*, by Miss Potter and Mrs. Ellis.—MARY MANN MILLER, *Los Angeles, California, January 6, 1926.*

Wood Ibis in the Yellowstone National Park.—On July 16, 1925, Mr. Elmer Harrold of Leetonia, Ohio, saw one of these birds (*Mycteria americana*) wading and feeding in a small marsh near the Grand Canyon of the Yellowstone in northwestern Wyoming. This bird was not timid, but permitted the observer to approach near and watch its methods of slowly wading about, agitating the water with one foot at a time, and occasionally swallowing some morsel seemingly disclosed by the stirring. This was reported to Park Naturalist Edmund J. Sawyer, and by him to the writer; neither one of us had ever before seen the species in Yellowstone National Park. Neither Wilbur C. Knight in his "The Birds of Wyoming", 1902, nor B. H. Grave and Ernest P. Walker in their "Wyoming Birds", 1913, record this species in Wyoming. But Aretas A. Saunders gives two records in Montana (A Distributional List of the Birds of Montana, 1921), while W. Vincent Evans records it as "extremely rare" (Birds of Park and Sweetgrass Counties, Montana). Messrs. Harrold and Sawyer are to be congratulated on a new distributional record for this species.—M. P. SKINNER, *Roosevelt Wild Life Forest Experiment Station, New York State College of Forestry, Syracuse, New York, January 2, 1926.*

A Third Rusty Blackbird to Be Recorded in California.—On Saturday afternoon, November 14, 1925, while at Monte Vista Ranch, Jamacha, San Diego County, California, I saw a bird that I did not recognize, in a piece of low, semi-marsh land covered with short grass and weeds such as grow in alkaline marshes. When flushed, the bird flew about twenty-five feet and alighted in a bare willow. I returned to my car about a mile away and, coming back with my gun, found the bird had disappeared; later, however, I located it crouched beneath a dead bush about two feet in height, close to the spot where it was first flushed. During the entire time it was in sight it was extremely tame, and rather sluggish in all its actions. I collected it and, upon taking it to the Natural History Museum, Balboa Park, San Diego, I found that it was a Rusty Blackbird (*Euphagus carolinus*), the third capture, according to the records, in the State of California. L. M. Huey of the Museum staff, who prepared the specimen, states that it was an adult female, weight 55.5 grams, and that the crop and stomach were empty. It is now no. 10163 in the collection of the San Diego Society of Natural History.—JOSEPH W. SEFTON, JR., *San Diego, California, November 16, 1925.*

Bird Notes from Wheatland, Wyoming.—On May 23 and 24, 1925, I had the pleasure of a trip to the mountainous country at the southwest base of Laramie Peak, and again on October 3 and 4, 1925. While there I observed for a brief time the birds of that region. Most of my time was spent in studying the Dusky Grouse, but I never missed an opportunity of observing any other species that I might come across in my wanderings. The country visited lies at about 8,000 feet altitude and it is traversed by many small streams bordered with aspen, willow, and pine.

Dusky Grouse. *Dendragapus obscurus obscurus*. This is probably the most common bird of the entire region. During the spring trip it was most easily approached in the early morning and the males drummed frequently from the rocky open timbered ridges. Later in the day the birds were flushed from the thick groves of aspen and pine, and droppings found on these feeding grounds indicated brooding birds. It was not until we were about ready to leave for home that we discovered a nest of eight eggs under the corner of a projecting rock on a sparsely timbered pine ridge that was

interspersed with sage-brush. The nest was a rounded depression in the ground lined with but a little grass and a few grouse feathers. It was eight inches across and three inches deep, and so placed under the rock that the bird could leave easily from three sides and was guarded from the rear by the rock itself. The eggs were typical of this species and were much incubated. I doubt if this can be taken as the usual condition of incubation at this time, but the season was very much advanced for this country. The female was so slow in flushing that I was able to touch her as she left the nest. During the spring season the birds were found feeding chiefly on pine needles, supplemented with other vegetable growth from among the aspen copses. No young birds were noted at this date. Old birds on being flushed almost invariably flew into a nearby tree and sat stupidly watching me until I was out of sight. In the autumn this grouse was still fairly common about its spring haunts, but was found most commonly in large flocks high up on the timbered ridges. During the fall it appeared to be feeding on pine needles largely, supplemented with partridge berries. The birds were not at all shy and I secured a fine specimen by knocking it out of a tree with a rock. The crop of a bird killed the preceding fall was literally packed with pine needles nipped off in very equal lengths of three-fourths of an inch each. It is my belief that these birds would soon become exterminated if we did not have long closed seasons, for it would be possible to shoot entire families, owing to their extreme fearlessness.

Western Mourning Dove. *Zenaidura macroura marginella*. Fairly common in the entire region but found chiefly on the more open ridges. They were just beginning to nest at this altitude, while many were nesting in and about Wheatland by May 15. None was seen during the fall trip.

Golden Eagle. *Aquila chrysaetos*. One was noted on the morning of the second day of the spring trip. I was up at sunrise, and having climbed to the top of a nearby ridge was listening to the bird notes and songs, when suddenly I was aware of a "zooming" sound. Glancing up I saw an object dropping like a plummet from the sky, to finally alight upon a cliff about a half mile distant. On closer investigation I found it to be a fine Golden Eagle. This is the first time I have ever noted such a performance by one of these birds.

Pale Horned Owl. *Bubo virginianus occidentalis*. This bird was not noted on the spring trip, but one was seen at camp in the early morning of the first day of the autumn trip.

Rocky Mountain Hairy Woodpecker. *Dryobates villosus monticola*. Two pairs were noted during the spring trip and a single individual was seen in the fall. All were among the small aspens of the water courses.

Williamson Sapsucker. *Sphyrapicus thyroideus*. During the spring trip one pair was noted on an old stub due west of the peak, in a rather well-timbered and mixed-timbered section. Evidently they were going to nest, as they entered several old holes in the stub, and the male seemed very solicitous.

Lewis Woodpecker. *Asyndesmus lewisi*. This is the most common woodpecker of the region in the spring. Some dozen pairs were seen in all types of country. Very evidently they were not nesting at this date and none was noted in the fall.

Red-shafted Flicker. *Colaptes cafer collaris*. A few pairs were seen in the spring, but although they should have been nesting, no nests were found. Individuals were seen in all parts of the country in October.

Poor-will. *Phalaenoptilus nuttalli nuttalli*. Although none of these birds was actually seen, during the fore parts of the nights of the spring trip they called continuously from the tops of the rocky ridges that had some down timber on them. They seem to prefer rather open ridges and I have known them to keep up their eerie calls continuously through a clear night.

Broad-tailed Hummingbird. *Selasphorus platycercus*. During the spring trip, Broad-tails were seen quite commonly along the water courses where there was plenty of willow growth, and where there were steep hillsides nearby more or less covered with pine. This must have been in or near their nesting areas, as the males were executing their courting flights. They would rise to a height of 150 to 200 feet, and descend vertically almost to the ground in an astonishingly rapid flight, producing a peculiar twittering sound, but how produced I could not say. I noted one bird while flying in large undulations producing the sound continuously. Often the sound produced reminded me of a light stick being applied to the spokes of a rapidly moving

buggy wheel. They were seen to perch frequently on a prominent dead twig of a pine and from this chosen perch the bird would leave to perform his aerial flight. None was noted on the autumn trip.

Magpie. *Pica pica hudsonia*. None was noted on the spring trip, but several were seen during the autumn where hill and plain country come together. They are birds that are chiefly seen along lightly wooded streams of the plains country.

Clark Nutcracker. *Nucifraga columbiana*. Common, both fall and spring, but no nests were found. It was evident that the birds were nesting on the west side of Laramie Peak, as they were noted feeding in the creek bottoms and flying to and from the big timber at all times of the day. Judging by their actions, young were in the nests. In the fall these birds were leisurely feeding in the tops of the pines. They are never easy to approach closely, seemingly shy of man; but they are always pleasing to encounter, active and business-like of manner, and very cheerily calling to one another. Only once have I witnessed one of their wonderful plunge flights. While hunting deer in October, 1923, on the east side of Laramie Peak, one of these birds came over the top of the peak, and while yet a thousand feet or more above the valley floor, nose-dived almost to the ground, when he turned upward to check his speed, causing a plainly audible roar of wings. I should consider this the second commonest bird of the region, running a close second to the Dusky Grouse.

Pinyon Jay. *Cyanoccephalus cyanocephalus*. A few stragglers were noted along some of the more open ridges during the spring trip. None was seen in the autumn.

Thick-billed Redwing. *Agelaius phoeniceus fortis*. In the spring a few pairs were observed along the water courses where meadows were adjacent.

Western Meadowlark. *Sturnella neglecta*. Scattering pairs were noted both spring and fall in the meadows that were large enough to offer shelter to the birds.

White-crowned Sparrow. *Zonotrichia leucophrys leucophrys*. This is a fairly common species along the water courses, and in May the birds were in full song. One beautiful scene that I shall long remember met my view as I was standing on the bank of a large beaver pond on Bear Creek just at sundown. The shadow of the mountain had struck across the pond. From its quiet depths a trout rose occasionally, not thirty feet from me five beaver were playing about as though I did not exist, and in the tops of the adjoining willows the White-crowns were singing their melodious vespers.

Mountain Song Sparrow. *Melospiza melodia montana*. I noted one pair in the spring and several individuals in the autumn, at this time generally distributed but always near water.

Western Tanager. *Piranga ludoviciana*. One beautiful male was seen among the tops of the aspens, where it was feeding on the opening buds.

Western Warbling Vireo. *Vireosylva gilva swainsoni*. A common species of the aspen copses. I do not believe they could have been long returned from the south. None was seen in the autumn.

Audubon Warbler. *Dendroica auduboni auduboni*. In the spring this species was seen occasionally in pine timber. The birds seemed to be feeding about the new growth of needles at the tips of the branches.

Rock Wren. *Salpinctes obsoletus obsoletus*. Quite commonly found on the rocky ridges, where they sang at all hours of the day but especially in the morning and evening. None was seen in the fall.

Mountain Chickadee. *Penthestes gambeli gambeli*. A few of these nomads of the forest were seen in the groups of aspens both spring and autumn, always busily engaged in hunting insects. They have many characteristics in common with their cousins, the Long-tailed and Black-capped chickadees.

Townsend Solitaire. *Myadestes townsendi*. Only one pair was noted in the spring, on a high openly timbered ridge. They were seen commonly in all sections in the fall, at which time their actions reminded me of the bluebird, as did also their weak twittering call. They occasionally struck into a strong, full song.

Western Robin. *Planesticus migratorius propinquus*. This I believe to be the third most common species of the region both spring and fall. They were in full song in the spring, and the high altitude and extreme solitude of this mountain fastness added a peculiar beauty to the song to make it remembered above all robin songs I have ever heard. Only one bird of this region had a finer, more varied, richer song, a thrush the species of which I was unable to determine. The robins sang occasionally during nights which were bright and clear. Three nests were found, one six feet from the ground in the crotch of a small aspen in a dense aspen grove, another in a small

pocket about one-third of the way up a fifty-foot cliff, and yet another on the horizontal branch of a pine, thirty feet from the ground. During the fall these birds were found feeding in all sections of the country and they were quiet except for their short calls on taking flight.

A few other species were noted, but not definitely in regard to the subspecies to which they belonged. Among these were a Pink-sided Junco, a Black-headed or Long-crested Jay, and an Olive-backed Thrush.—JAMES A. NEILSON, Wheatland, Wyoming, December 7, 1925.

Two Unrecorded Occurrences of the Richardson Pigeon Hawk in California.—In connection with certain work in progress at the Natural History Museum, Balboa Park, San Diego, California, it became necessary to study critically the pigeon hawks in the Museum collection, with the object of identifying specimens that were being placed on public display. The presence in the Museum collection of two specimens of *Falco columbarius richardsonii* not before recorded seems worthy of note, as this bird has to date but four authentic records from California. The birds are no. 358, collection of the Natural History Museum, female, Riverside, California, January 31, 1878, collected by Frank Stephens, and no. 360, collection of the Natural History Museum, female, San Diego, California, January 10, 1900, collector unknown, but from the collection of Frank X. Holzner, now deceased, who, at that time, was a local taxidermist. Both skins were sent to Dr. Joseph Grinnell for verification of the identification, and he in turn handed them to Harry S. Swarth, who confirmed the former findings. A specimen recorded as *Falco columbarius richardsonii* by Henry Grey (Condor, xxvii, January, 1925, p. 37), taken "about the end of September, 1915", and "now in the Museum in Balboa Park", is a mounted bird that was originally identified by Frank Stephens. Mr. Stephens is now convinced that this specimen is the commoner form, *Falco columbarius columbarius*, and not *Falco columbarius richardsonii*.—LAURENCE M. HUEY, Natural History Museum, San Diego, California, December 4, 1925.

Man-o'-war-bird in Ventura County, California.—On July 29, 1925, in company with Messrs. Parmenter, Varick and Nichols, I watched a Man-o'-war-bird (*Fregata minor palmerstoni*) fly along the beach between Ventura and Hueneme. Previous records for this region are one shot at Hueneme in 1915, and one seen by W. L. Dawson near Santa Barbara on August 12, 1912, and another (or the same bird) seen by Messrs. Dawson and Torrey on August 24, 1912.—RALPH HOFFMANN, Carpinteria, California, November 14, 1925.

Occurrence of the Roseate Spoonbill in the Colorado Delta.—While passing through Ensenada recently, I stopped in at El Museo Regional there. Sr. David Goldbaum, the curator, pointed out to me, among other things of interest, a mounted specimen of the Roseate Spoonbill (*Ajaia ajaja*). This bird, he told me, had been presented by Mr. E. W. Funcke.

In due time I got in touch, through correspondence, with Mr. Funcke, who is now a resident of Tia Juana, California. He writes me under date December 31, 1925, that the bird I saw was killed by him about 24 miles south of Mexicali, on Volcano Lake. There were five of the birds together, two of which were killed. This was "about 12 years ago".

Mr. Funcke says further that although scarce, a few of these birds may be found occasionally, at Volcano Lake or on the small lagoons near the Hardy River. He recalls seeing not over 12 or 15 in the four or five years that he hunted there.

This information as to the presence of the Roseate Spoonbill on the Lower California side of the Colorado River delta supplements that given, to the same purport, by Mr. Griffing Bancroft (Condor, xxiv, 1922, p. 98).—J. GRINNELL, Museum of Vertebrate Zoology, Berkeley, California, January 7, 1926.

EDITORIAL NOTES AND NEWS

As usual, the coming May issue of the CONDOR will contain the official membership list of the Cooper Ornithological Club. Each Cooper Club member is requested to look up his name in last year's roster, to see if that entry was altogether correct. If not, or if the present mailing envelope of the CONDOR be incorrectly addressed, send the facts at once to the Club Business Manager, Mr. W. Lee Chambers, Drawer 123, Eagle Rock, California.

The Arrangements Committee in charge of the Annual Meeting of the Cooper Club at Los Angeles has changed the time to April 8 to 10, instead of April 5 to 7, as first announced. Members are urged to lend their aid in insuring the success of the meeting, by their presence if possible, by participating in the program, and by advertising the occasion. The bird-loving public should be advised that the sessions are open to all, regardless of membership in the Club, and it is desirable that this fact be given wide publicity. If you wish for a place on the program, write to Dr. L. H. Miller, 6066 Hayes Avenue, Los Angeles. If you are unable to attend in person, arrangements may be made to have your contribution read for you.

Dr. Glover M. Allen's book, "Birds and their Attributes" (Marshall Jones Company, Boston, \$3.50) has been adopted as text in an "upper division" zoology course in the University of California. It is proving itself well adapted for this use, better, we believe, than would any book in ornithology previously published in the United States. The treatment deals with the general principles governing avian evolution and existence, as based upon well attested facts. The book is down to date, authoritative, scholarly in every particular. No serious student of bird-life should fail to have read it, and pondered the numerous interesting problems it touches upon.

Gilbert White of Selborne in course of some critical remarks aimed at Linnaeus, in one of his letters, dated August 1, 1771, declared himself as follows: "Faunists, as you observe, are too apt to acquiesce in bare descriptions and a few synonyms: the reason is plain, because all that may be done at home in a man's study; but the investigation of the life and conversation of animals is a concern of much more

trouble and difficulty, and is not to be attained but by the active and inquisitive, and by those that reside much in the country." Quite as good a gibe today as 155 years ago!

COMMUNICATION SPECIES VERSUS SUBSPECIES

To Cooper Club Members:

The "straw vote" is an instrument that can be appealed to to very good purpose now and then, and my appeal in this instance is to ascertain just how CONDOR readers feel toward the question of employing subspecific names in general ornithological literature. A great deal of objection is continually to be heard, often in no uncertain terms, to "subspecies". The undersigned, even though primarily a systematist, has a good deal of sympathy for the point of view of some of the objectors in this regard. Indeed, he himself long ago proposed (*Auk*, XXIX, 1919, p. 563) that a check-list of birds ought to be issued, minus any and all subspecies, for the use of bird students who find subspecies not only useless to them but the idea of them irritating. The very best presentation of the subject which I have seen has just been set forth as part of a review by "W. S." in the *Auk* (January, 1926, p. 119), which is as follows:

"The reviewer has no more personal use for subspecies separated on minute characters than has Mr. _____, because they do not happen to concern the work in which he is most interested; but that is no reason why he should object to others describing them or using them in their work, nor does it give him any warrant to doubt the accuracy of their work. Neither is he interested in the minute and detailed nomenclature of the muscles, nor is he able to distinguish them, but he realizes that others can do this and reach important results from their anatomical study. Why this rather general clamor against subspecies on the part of field ornithologists, collectors, oologists, etc., it is hard to understand. If subspecies do not pertain to their work, why bother with them? Let them be satisfied with the species, but do not try to hamper the work of those who can and do make use of them for the advancement of scientific knowledge."

To prove that I am in hearty accord with these sentiments, I am willing to put

out a new check-list of the birds of California, recognizing in it only full species, providing a vote should register sufficient encouragement of the idea. I would aim to make this a check-list of *species*, consistently so, in the sense in which this term is exemplified in the A. O. U. Check-list, exhaustive in every detail within the radius of available information—as to distribution geographically, ecologically and seasonally; but I would put all names other than the accepted ones, subspecific as well as otherwise, applying in any part to each species, in the synonymy of that species. To repeat, subspecific names would be found there, but only in synonymy, those long in the literature as well as the lately proposed ones so often stigmatized, with or without justification, as needless recognition of "millimeter races". For, be it known that, in my opinion, no more scanty grounds for subspecific recognition are known to date than those which form the basis of, say, the "Long-tailed Chat" versus the "Yellow-breasted Chat", and the "Calaveras Warbler" versus the "Nashville Warbler". In these and similar cases the scientific name of the *species* will be entered to the exclusion (save in synonymy) of the name of the subspecies; and vernacular names will be chosen accordingly. A variety of difficult problems are plainly in the offing; but I believe each can be solved on some reasonably practical basis.

All this does not mean that I am personally relinquishing the recognition of subspecies. These will still find an important use in phylogenetic and geographic studies, and they will merely be reserved for employment in the more technical type of publication devoted to these particular small portions of the general field of ornithology.

Now to the point: Will each member of the Cooper Ornithological Club who has an opinion, and who cares to make it effective, please within the next 30 days drop me a card voting *yes* or *no* on the proposition: shall the next check-list of the birds of California deal with *species* to the exclusion of subspecies? It is unnecessary to go into qualifying discussion; just say flatly *yes* or *no*.—J. GRINNELL, Museum of Vertebrate Zoology, Berkeley, California, March 15, 1926.

PUBLICATIONS REVIEWED

FORBUSH'S BIRDS OF MASSACHUSETTS AND OTHER NEW ENGLAND STATES.*—Of all the states in the Union Massachusetts

now proves itself to be the most advanced in matters ornithological. For these many years it has not only maintained the office of Economic Ornithologist in its Department of Agriculture, but it has seen to it that very many contributions of high merit from that office have been printed in excellent style. The present volume marks the culmination of years of continuing improvement from both the ornithological and the typographical standpoints.

From the outset, Edward Howe Forbush has been the Economic Ornithologist of Massachusetts. Besides an enormous amount of lecturing and popular (newspaper) writing, he has conducted extensive economic investigations and prepared for the State press a long series of most creditable economic papers. Two large books, "Useful Birds and Their Protection", and "Game Birds, Wild-Fowl and Shore Birds", have come from his pen, and run through three and two editions, respectively; they are now out of print. Now comes Part I of what may be considered Forbush's "magnum opus"—unless he essays something still more exhaustive; and it is a lasting monument to his industry and scholarship as well as a thorough credit to the judgment of those Massachusetts state officials who have engineered the provision of the necessary financial backing.

This latest production of Forbush's constitutes a notable contribution to the general literature of ornithology. As such, readers of this review (presumably a good share of the Cooper Club's membership) would do well each to acquire a copy (or a set, rather, for there are to be two more volumes). We understand through a circular issued from the office of the Commissioner of Agriculture that the present volume may be had for \$5.00 plus carrying charges by applying to the Public Document Division, State House, Boston.

The illustrations are exceptionally fine, comparing favorably with those of far more expensive works. The half-tones are beautifully reproduced from first-class

* Massachusetts Department of Agriculture | Dr. Arthur W. Gilbert, Commissioner | Birds of Massachusetts | and Other New England States | By | Edward Howe Forbush | Part I. Water Birds, Marsh Birds and Shore Birds | Illustrated with Colored Plates from Drawings by | Louis Agassiz Fuertes | and | Figures and Cuts from Drawings and Photographs by | The Author and Others | Issued by Authority of the Legislature | 1925, Large 8vo or small 4to (188 x 248 mm., type-bed 136 x 180 mm.), pp. xxxii + 481, 33 colored pls., 35 numbered figures on inserted plate paper (usually 2 half-tone figures to a page), and 68 unnumbered cuts from line drawings. Our copy received November 27, 1925.

photographs. The 33 colored plates do full justice to Fuertes at his best. One feature disturbed us a bit when we first opened the book: the plates have no white borders; in other words the entire surface of each plate page is taken up with color (background plus from 4 to 10 avian subjects). But as we look back and forth through the book we find ourselves getting used to this latest wrinkle in the handling of illustrations.

As already intimated, the text as well as the illustrations bear the closest scrutiny: The typography is well-nigh perfect. The small-type, technical paragraphs are concise and yet adequate. In these the reader finds down-to-date statements in regard to molts and plumages, distribution, etc. The nomenclature employed is properly conservative.

The large-type portion of each species account sets forth well selected biographical facts. Where important New England birds are concerned the biographies are especially full, and then much information relative to the species at large is frequently incorporated. All these accounts give evidence of careful discrimination on the part of the author. In other words, we are provided with thoroughly dependable natural history.

A noteworthy contribution to philosophic ornithology is comprised in the Introduction where, with the aid of two charts, Mr. Forbush discusses the correlation recently discovered, of the sporadic occurrence of southern birds along the North Atlantic coast with the occurrence of West Indian hurricanes. These storms of great violence travel northeastwardly, and it is shown in a series of instances that the appearance in New England of southern species followed shortly.

Through and through, Part I of Forbush's "Birds of Massachusetts" is an admirable production. We congratulate the author upon his achievement and wish him an equal measure of success in the issuance of parts 2 and 3.—J. GRINNELL, Berkeley, California, December 24, 1925.

MINUTES OF COOPER CLUB MEETINGS SOUTHERN DIVISION

NOVEMBER.—The Southern Division of the Cooper Ornithological Club held its November meeting on Tuesday, November 24, 1925, at the Southwest Museum; about seventy members and guests were present. The meeting was called to order by President Wyman. Minutes of the

October meeting were read and certain changes were made. Minutes of the Northern Division for October were read. Following are the names proposed for membership: Ralph Emerson De Lury, Dominion Observatory, Ottawa, Ontario, Canada, by W. Lee Chambers; Mrs. Nellie C. Rigden, 2019 Lake St., San Francisco, Calif., by Harold Michener.

The secretary was in receipt of a letter from the Fish and Game Commission in response to a protest of the Southern Division against the outlawing of cormorants and White Pelicans. The Commission stated that this matter was entirely out of its hands, the action having been taken by the Legislature.

An announcement of much interest was made by Mr. Law, in which he told of the decision of the Board of Governors of the Cooper Club to hold a series of annual meetings, similar in character to those of the A. O. U. He followed his announcement with a motion that the Southern Division undertake the holding of the first of these meetings here in Los Angeles the first Monday, Tuesday and Wednesday of April, 1926. This was seconded by Dr. Miller with the suggestion that the Chair be empowered to appoint a committee to take charge of arrangements, to which Mr. Law acceded. The motion was unanimously carried, and later in the evening Mr. Wyman appointed Messrs. Harris, Chambers and Law.

Dr. Loye Holmes Miller was the speaker of the evening, his subject being "A Biologist in Central America". His vivid description of Salvador, its people, the food, weather, pests, vegetation, etc., gave his hearers quite a comprehensive idea of conditions in that country. He exhibited a number of interesting specimens of birds found there, some of which showed, as he had stated, that not all tropical birds are brightly colored. Adourned.—ELLA H. ELLIS, Secretary.

DECEMBER.—The Cooper Ornithological Club, Southern Division, held its regular monthly meeting Tuesday evening, December 29, 1925, at the Los Angeles Museum, Exposition Park; about thirty-five members and guests were present. The meeting was called to order by President Wyman, and minutes of the November meeting were read and approved. November minutes of the Northern Division were read. Following is a list of names proposed for membership: William Howard Ball, 1233 Irving St., N. W., Washington, D. C., and William Beebe, 33 West 67th St., New York City, by W. Lee Chambers;

Otto S. Fischer, Trinidad, Cuba, by Austin Smith; Miss S. Edith King, 1804 Maltman Ave., Los Angeles, Calif.; Inez May Neterer, 2702 N. Broadway, Seattle, Wash., Carl Richardson, Trail, Oregon, and John B. Rishel, Whittier School, 24th Ave. and Marion St., Denver, Colo., by Harold Michener; Paul E. Trapier, 3672 Mentone Ave., Palms, Calif., by George Cantwell.

The committee appointed some months ago to ascertain the most convenient night of meeting submitted its report, in which it was recommended that the meeting night of the club be changed to the last Tuesday in each month and the meetings be held about evenly divided between the Southwest Museum and the Los Angeles Museum, the speaker of the evening to have the privilege of designating the place preferred. Upon motion of Dr. Bishop, seconded by Mr. Law, it was voted that the report be received and filed and the committee discharged, whereupon Mr. Law moved that the meeting night be changed to the last Tuesday in the month and that the place of meeting be left to the president and secretary. This was seconded by Dr. Bishop and carried.

A communication was read from Dr. T. S. Palmer, Secretary of the American Ornithologists' Union, requesting the appointment of a representative of the Cooper Club to confer with similar representatives of the A. O. U. and the Wilson Ornithological Club in reference to a proposed plan to perpetuate "Bird Haven", near Olney, Illinois, as a permanent bird refuge in memorial to its founder, Mr. Robert Ridgway. A letter from the secretary of the Northern Division stated that at their December meeting, held on the 19th, Mr. Ruthven Deane of Chicago had been appointed to act for them in this matter. On motion of Dr. Rich, duly seconded and carried, the secretary was instructed to request Mr. Deane to represent the Club as a whole. Mr. Wyman announced that as election of officers is due at the coming meeting, he would appoint the following as a committee to consider candidates: Dr. Rich, Mr. Appleton and Mr. Chambers.

The Club then had the pleasure of listening to an interesting talk by Dr. Lynds Jones of Oberlin. In speaking of the ornithological work being done in the Mississippi Valley and the Great Lakes region, bird-banding was given first place, and in this connection Mr. Prentiss Baldwin was credited with being responsible for the great increase in attention to that particular work. Dr. Jones has made

many trips with students between Ohio and the Pacific Coast, and has found much of interest in his study of the reaction of different types of animal life to environment.

Dr. Bishop gave the result of his investigation of the supposed Albatross in captivity at Huntington Beach, which he had mentioned at a recent meeting. The bird proved to be a Man-o'-War Bird which had been caught on a halibut line off the end of the pier. He also read from a letter written by Mr. C. G. Harold, of Winnipeg, telling of the destructiveness of the Marsh Hawk near Tofield, Alberta. Adjourned.—ELLA H. ELLIS, *Secretary*.

NORTHERN DIVISION

NOVEMBER.—The November meeting of the Northern Division of the Cooper Ornithological Club was held at the Museum of Vertebrate Zoology, Berkeley, on November 19, 1925, at 8 P. M. President Lastreto occupied the chair. Members present were: Mesdames Anderson, Bamford, Delpot, Mikesell, Grinnell, Schenck and Schlesinger; Misses Bastin, Beaman, Cockefair, Culver, Fisher, Gunn, Head, Holcombe, Thomson and Wythe; Messrs. Borell, C. A. Bryant, Cain, Carriger, Clabaugh, Cooper, Cozens, Dixon, Foster, Grinnell, Hall, Holman, Kibbe, Lastreto, Mailliard, Palmer, Perine, Schenck, Stow, Wheeler and Lieutenant Wolfe. Visitors were: Mesdames Clabaugh, Gerlach, Linsdale, Palmer, Perine, Stow and Wheeler; Miss Wainwright; and Messrs. Joseph Dixon, Jr., Follett, Linsdale, Shaw and Spruyt.

Minutes of the Northern Division for October were read and approved. Minutes of the Southern Division were read. The following proposals for membership were read: Mr. Jean Linsdale, Department of Zoology, University of California, Berkeley, Calif., by E. Raymond Hall; Mr. Wilbur Irving Follett, 3621 Broadway, Oakland, Calif., by H. C. Bryant; W. F. Sampson, 215 Market St., San Francisco, Calif., by H. W. Carriger.

The name of Dr. Barton Warren Evermann was proposed for honorary membership by Harry S. Swarth, Joseph Dixon, J. Eugene Law, and W. Lee Chambers. Following precedent and in compliment to Dr. Evermann the Southern Division at their October meeting had waived the month's delay and unanimously elected Dr. Evermann to honorary membership, and a move was made to follow this example in the Northern Di-

vision; but President Lastreto, in strict accordance with a provision of the Constitution, laid the proposal over for action at the December meeting.

A request was read from the Secretary of the Southern Division that the Northern Division act for them in appointing delegates to the meeting of the Affiliation Committee of the American Association for the Advancement of Science. President Lastreto appointed Dr. Evermann and Mr. Joseph Mailiard to act as delegates representing both divisions of the Club.

Mr. Grinnell gave a brief resumé of the annual report of the business managers of the Cooper Club, showing the steady growth in the assets of the organization and its progress toward financial prosperity. He then read a telegram from Dr. T. S. Palmer, Secretary of the American Ornithologists' Union, which gave the first news of the very successful forty-third annual meeting of the Union, just held in New York City.

The evening's program was provided by Mr. R. H. Palmer of Palo Alto, a Cooper Club member of ten years standing and for some years consulting geologist to the Mexican Government. During his governmental employment Mr. Palmer's duties carried him over a large and varied area of Mexico and his most interesting talk was based on specimens collected and notes taken during his trips. Adjourned.—HILDA W. GRINNELL, Secretary.

DECEMBER.—The regular meeting of the Cooper Ornithological Club, Northern Division, was held at the Museum of Vertebrate Zoology, University of California, Berkeley, on Thursday evening, December 17, at 8:00 P. M., with President Lastreto in the chair and the following members present: Mesdames Allen and Grinnell; Misses Cockefair, Smith and Thomson; Messrs. Borell, Bryant, Carriger, Follett, Grinnell, Kibbe, Lastreto, Linsdale, Perine, Swarth and Wolfe. Visitors were Mrs. Heald, Miss Spencer and Messrs. Percival and Shaw.

Minutes of the Northern Division for November were read and approved. Minutes of the Southern Division for November were read. Upon the motion of Dr. Bryant, Dr. Barton Warren Evermann was elected by unanimous vote to honorary membership in the Cooper Ornithological Club.

A report by Mr. Swarth that he had recently seen two Sparrow Hawks flying

in and out of the cornices on the Emporium Building, San Francisco, brought out the fact that the Sparrow Hawk is not an uncommon bird about the business section of that city, Mr. Carriger and Mr. Lastreto giving similar instances of occurrence. Mr. Grinnell reported that two broods were successfully raised on the Botany Building on the University campus last summer. Mr. Borell contributed to a discussion of the food of the Sparrow Hawk by citing the fact that he once saw a bat caught by a Sparrow Hawk in Kearney Park, Fresno.

Mr. Swarth stated that while on a recent visit to Los Angeles he had seen a flock of twenty-five or more of the exotic ring doves living in a naturalized condition in Central Park in that city. Mr. Swarth also told of rare books and manuscripts which he had had the privilege of seeing at the Huntington Library. Among these were the elephant folio of Audubon, and the manuscript "Gleanings from Nature" by Edward White, brother of the author of "A Natural History of Selborne". He spoke of having seen a Bird of Paradise, figured without feet, this having been the belief of early naturalists, since the skins which fell into their hands had been prepared by the natives of New Guinea in a primitive fashion which included the removal of the feet. European naturalists inferred that the birds were without feet in life. Dr. Bryant reported the presence of living Birds of Paradise at Robison's Bird Store on Market Street, San Francisco.

Under the head of recent literature, Mr. Grinnell reported briefly on the following books: "Birds and their Attributes" by Glover M. Allen; "Birds of Florida" by Harold H. Bailey; and Volume I of "Birds of Massachusetts and other New England States" by E. H. Forbush.

A telegram was read from Dr. T. S. Palmer, Secretary of the A. O. U., asking that the Cooper Club appoint a representative to act with one each from the Wilson Club and the A. O. U. on the project to provide a fund to maintain Ridgway's home place of eighteen acres at Olney, Illinois, as a permanent bird refuge in commemoration of Ridgway's services to American ornithology. Mr. Grinnell moved that the chair be requested to appoint such a representative. Mr. Kibbe seconded the motion, which was duly carried. Believing that an eastern member would best serve the interests of the Club in this matter the chair announced the appointment of Mr. Ruthven Deane of Chicago.

At the request of President Lastreto, Mr. Carriger reported upon the results of a "vermin shoot" held recently near Modesto under the auspices of the newly organized Sportsmen's Club. It was the sense of the meeting that much more harm than benefit accrues to wild life from such campaigns; and methods of educating the public to this opinion were discussed. *Mr. Carriger, seconded by Mr. Kibbe, moved that the chair appoint a committee of two to act with a similar committee from the Audubon Association of the Pacific concerning this matter.* Mr. Grinnell moved an amendment to the motion, that the committee be given power to act. Mr. Carriger accepted the amendment and the motion was duly carried. The chair announced the appointment of Mr. Carriger and Dr. Evermann as members of this committee.

Mr. Grinnell drew attention to the first annual meeting of the Cooper Ornithological Club to be held in Los Angeles in April, 1926, under the auspices of the Southern Division of the Club and moved that the chair appoint a committee of one to coöperate with the arrangements committee of the Southern Division. The motion was carried and Mr. Lastreto later announced the appointment of Mr. Swarth.

Officers for the ensuing year were nominated as follows: President, Amelia S. Allen; Vice-President, Joseph Mailliard; Secretary, Hilda W. Grinnell.

Two papers had been prepared by Mr. Milton S. Ray for the evening's program. In the absence of Mr. Ray the first paper, which described the nesting of the Western Goshawk in California, was read by the Secretary; the second paper, on the care of oological collections, was read by Mr. Carriger. Adjourned.—HILDA W. GRINNELL, *Secretary.*

JANUARY.—The regular meeting of the Northern Division of the Cooper Ornithological Club was held on January 28, 1926, at 8:00 P. M., at the Museum of Vertebrate Zoology, Berkeley, with President Lastreto in the chair. The following members braved the rain-storm and were present: Mesdames Allen, Grinnell and Mexia; Misses Beaman, Fisher, Holcombe, Howard, McLellan and Thomson; Messrs. Bryant, Bull, Cain, Cozens, Follett, Grinnell, Hall, Jesser, Lastreto, Linsdale, Jones, Palmer, Perine, Swarth and Unglisch. Visitors were Mesdames Bryant, Hall, Jesser, Sargent and Visher; Miss Spencer and Mr. Sargent.

Minutes of the Northern Division for

December were read, corrected, and approved. Minutes of the Southern Division for December were read. A letter from Dr. Evermann was read expressing his appreciation of the action of the Club in electing him to honorary membership.

The Secretary reported that Mr. Ruthven Deane of Chicago had found it impossible to serve on the Ridgway Memorial Committee and the chair announced the appointment of Mr. Wilfred H. Osgood to serve, in his stead.

Mr. Swarth called attention to the first annual meeting of the Cooper Ornithological Club, to be held in Los Angeles on April 8, 9 and 10, 1926, and urged that as many members as possible plan to be present. Mr. Lastreto requested that the Secretary enter Mr. Swarth's remarks in the minutes, where they might meet the eyes of members not present at the January meeting, and he expressed the hope that he himself would have returned from South America in time to be present.

President Lastreto announced that Mr. Joseph Mailliard had expressed the desire that his name be withdrawn from nomination for the vice-presidency of the Northern Division for the year 1926, whereupon Mr. Swarth made a motion accordingly. This motion having carried, upon motion by Mr. Grinnell, seconded by Mrs. Allen, Mr. Henry W. Carriger was nominated as vice-president. The annual election of officers for the division then took place. Mrs. Amelia S. Allen was elected President, Mr. Henry W. Carriger, Vice-President, and Mrs. Hilda W. Grinnell, Secretary. Mr. Lastreto escorted Mrs. Allen to the chair and the evening's program was taken up.

Dr. Lynds Jones of Oberlin College was the evening's speaker, upon the subject "Ornithology in the Mississippi Valley". His entertaining talk included a description of the topography of the country, and its peculiar advantages to those interested in bird banding, among whom the leaders are S. Prentiss Baldwin of Ohio and Wm. I. Lyon of Illinois. The speaker told of other ornithologists together with their special problems. The careful and long-continued observations of Miss Althea R. Sherman of McGregor, Iowa, in her studies of the flicker, the Ruby-throated Hummingbird and the House Wren were particularly commended.

In closing his talk Dr. Jones told briefly of his many auto trips between Oberlin and the Pacific Coast and some of their points of interest to the ecologist. Adjourned.—HILDA W. GRINNELL, *Secretary.*





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WANTED FOR CASH—Bull. Nuttall Orn. Club, vol. 1, no. 3; Auk, vol. 1, no. 2; vol. 2, no. 2; Nidiologist, vol. 1, no. 2.—H. S. SWARTH, Museum of Vertebrate Zoology, University of California, Berkeley, Calif.

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